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SOME NOTES ON THE LIFE OF DOCTOR HENRY GRATTAN DOUGLASS.

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ALTHOUGH Dr. Henry Grattan Douglass lived in New South Wales for only about a third of his life—first from 1821 until 1828, and then from 1848 until his death in 1865—yet during that time, as the inscription on his grave sets forth, he "held various high offices in the Colony, and has at all times been an active supporter of its educational and benevolent institutions, some of which he has aided in establishing".

Douglass's life here has already been dealt with in some detail by Dr. Keith Macarthur Brown,[1][2] and this paper will therefore consider in particular aspects not elaborated by him, and especially those periods when Douglass did not live in Australia.

Henry Grattan Douglass, named after the Irish reformer Henry Grattan, was born in Ireland in 1790, one of the children of Adam Douglass, an apothecary. There is no record of his boyhood, nor is it known when or where he obtained his early medical training; it seems unlikely that he was a student at Trinity College, Dublin, and if not, the alternatives would have been either apprenticeship (perhaps to his father) or attendance at one of the private medical schools which in those times provided medical education. Douglass first comes to our notice as a young man in military service; on December 21, 1809, he became a hospital mate (that is, apprentice), and on February 28, 1811, he was appointed assistant surgeon in the Eighteenth Foot Regiment. Military duty took him to the Peninsula and then to the West Indies, from where he was invalided home, after an attack of rheumatic fever, arriving early in May, 1812.[3] Although Douglass did not go on half-pay until 1814, there is no suggestion that he returned to active service, and in 1812 he married Hesther Murphy in Dublin.

During the next nine years Douglass gained considerable experience in his profession. For a time he was medical superintendent at the Cahir Fever Hospital and Infirmary, a post he may have obtained or gone to because of family associations, his grandfather living in Killenaule, in the same county (Tipperary) as Cahir. By the end of 1817 he was back in Dublin, living in Merrion Row.[4] Douglass obtained his membership of the Royal College of Surgeons of England in August, 1815, and in 1819 he was admitted as Licentiate of the King's and Queen's College of Physicians of Ireland. In 1817 Douglass published a pamphlet on typhus fever,[5] an epidemic of which was then causing alarm. This formed the subject also of his

thesis for the degree of doctor of medicine, which he obtained from Trinity College, Dublin.[5]

Douglass's pamphlet on typhus fever was written in response to increasing public alarm in Dublin at an epidemic which, after earlier ravages over all of Ireland, attacked the city in November, 1817. After considering briefly the mode of infection (it was not, of course, then known that typhus is transmitted by the louse), Douglass took up the main topic of his pamphlet, the prevention of infection, stressing the importance of cleanliness about the sick and proper ventilation in the patient's room, and, among the nurses, of living moderately, keeping the bowels open and taking adequate rest. He went on to point out that some were more liable to infection than others, and that "any enervated or debilitated state of the body predisposes to fever", such debilitation arising among those who have the advantages of comfortable living from their

FIGURE I.
Miniature of Dr. H. G. Douglass in the uniform of the 18th Regiment of Foot, Peninsular War, 1811.

eating and drinking too much, and among the poor from overcrowding and miserable conditions of living. Douglass considered that the much higher mortality among the well-to-do was a result of their intemperate habits, while the poor, although disease was more frequent among them owing to greater exposure to cold and damp, were subjected to milder attacks "because they are not fed nor nurtured by gross and improper diet". He then proceeded to lecture the gentry on their gross feeding as the cause of many diseases among them—'observe what agrees best with you, and eat that in *moderation*', he wrote, 'take proper sleep and make the mind tranquil'. The disclosure at the end of his pamphlet that only two deaths had occurred among 140 cases of typhus passing through his hands in November-December, 1817, at the emergency hospital set up at the Richmond General Penitentiary, and these both late admissions, says much for his professional skill.

One other event of importance is on record with regard to his life in Dublin, his election to the Royal Irish Academy. Douglass was balloted for and admitted a member on June 26, 1820, his name appears in the membership list of 1825, and he did not publish in the *Transactions* —those are the few facts available. The Royal Irish Academy has considerable status, little less than that of the Royal Society of London, and Douglass's election to it was not only an indication of his professional stature (a number of his colleagues were members), but would also have brought him into contact both with the learned and with those of importance in Church and State. The interests to which his membership of the Academy point were later to find expression in his associations with scientific bodies in New South Wales and in his work in connexion with the founding of the University of Sydney.

In an obituary[3] it is stated that "Dr. Douglass became closely connected with a set of celebrated philanthropists, and took part in their labours. He numbered among his personal friends the Frys, the Hoares, the Gurneys, and Allens, who then combined to ameliorate the condition of prisons, and soften the rigour of the penal laws." There is no evidence that Douglass was himself a Quaker—indeed, there is no record of him in the archives of the Society of Friends in Dublin—and so one must conclude that the association was that formed between people having similar ideals. His naming for Henry Grattan points to the liberal outlook of his parents, which must have influenced his development; but we also have his own statement, when returning thanks for his election in 1825 as a director of the Bank of New South Wales,[7] that he would support in his public career those liberal and independent principles "in which I was born . . . in which I was educated, and which have grown with my growth, and strengthened with my strength". His interests and actions certainly were so directed throughout his life, but blended with an authoritarian outlook, as witness his activities as a magistrate at Parramatta, his views on the popular agitation in England in the 1830's,[8] and the statement in his obituary[3] that "he was from position, and certainly from inclination, on the side of authority, not without a moderate leaning to all popular ideas".

Emigration to New South Wales.

Only about six months after his election to membership of the Royal Irish Academy, a great change took place in his life, for Douglass left Ireland for New South Wales. He arrived in Sydney on the convict ship *Speke* in May, 1821, accompanied by his wife and family. He was then aged 31 years. There is no clear statement as to why Douglass came to this country, but there is no reason to doubt that his motives for emigrating had their basis in his liberal and humanitarian principles, and that "his zeal in this cause led, we believe, to his acceptance of a colonial appointment where he might find ample scope for the plans of amelioration which have allured and disappointed so many generous minds".[3] Certainly, he arrived with the highest recommendation, a letter of introduction to Macquarie from Lord Bathurst, to which Macquarie replied:[9]

> Your Lordship may rest assured, I shall be most happy and feel every way well disposed to pay every possible attention and kindness in my power to Doctor Douglas and his Family, in Compliance with your Lordship's recommendation in favor of that Gentleman, and to render his Situation in the Colony as easy, comfortable and respectable, as may be practicable and consistent with his rank in life.
>
> I have just made the necessary arrangements for placing Doctor Douglas in Charge of the Colonial General Hospital at Parramatta (which particular Station he prefers to every other) where he will have considerable Private Practice and other advantages, besides being placed in the Center of a fine rich populous District.
>
> I intend immediately to appoint Doctor Douglas a Magistrate at Parramatta, and to build him a good comfortable Barrack, the present one for the Medical Officer at that Station being in a state of decay and almost uninhabitable. I shall consequently be under the necessity of hiring a good House in the mean time, for the residence of Doctr. Douglas and his Family, until a Government Quarter can be built for him.

For the strength of the recommendation, made evident by Macquarie's reply, it does not seem necessary to look further than Douglass's known activities and associations in Ireland; he had gone far in his profession, he was

interested in improving the lot of the poor and outcast, and his election to the Royal Irish Academy had brought him in touch with the influential. The author of an attack on Douglass in the *Austral-Asiatic Review*[10] states that he arrived with a letter of recommendation from Lord Castlereagh and suggests that espionage had been the service rendered; but there is no evidence for this, and it seems more likely that the recommendation was an outcome of Douglass's membership of the Academy, of which Castlereagh was a life member.

Douglass came to New South Wales in the last few months of Macquarie's enlightened governorship. He seems from the first to have been associated with the Wentworths[11]—if not because D'Arcy Wentworth was both a doctor and an Irishman, then because of similarity of outlook. The association presumably led to Douglass identifying himself with the Emancipist faction. This was a period when politics pervaded colonial life, and Douglass was soon in the thick of the fight. Of his medical practice there is little record; he had his work at the Colonial General Hospital at Parramatta and his private practice, and he was also medical attendant at the Female Orphan School, but these must have occupied less and less of his

FIGURE II.
The Colonial Hospital at Parramatta, erected by Macquarie in 1818, where Douglass commenced duty in 1821.

time as his public duties increased. In Parramatta he was not only a magistrate, but also superintendent of the Female Factory. Both these duties led him into strife with his fellow magistrates and with others, and especially with that believer in privilege and profit, Samuel Marsden. This strife may be termed political, in that it had its origin in the differing aims and outlook of the various social groups in the Colony, but personal antipathies entered largely into it. Douglass was certainly not restrained by his antagonists' ideas of their own importance; thus Marsden complained that he would do a thing merely "to annoy and distress".[12] Within a year of his arrival in the Colony accusations were being bandied about; there was trouble over the punishment Douglass ordered for one James Blackburn; there were charges of immorality with Ann Rumsby; and so it went on. Such accusations usually rebounded on Douglass's accusers; the Parramatta magistrates were found to have conspired against him and were dismissed. His feud with Marsden was particularly bitter. Marsden took action against him in the Supreme Court in 1823, and later there was an official inquiry in England into Marsden's accusations against him. Not only were the charges not proved, but Marsden was considered to have made them "entirely to satisfy *private hostility*".[13]

Before these poltical activities are followed to their conclusion, mention will be made of Douglass's association with the beginnings of scientific work in Australia, and of his connexions with philanthropic bodies. At the end of June, 1821, a few weeks after Douglass arrived in Sydney, the inaugural meeting was held of the Philosophical Society of Australasia, the first scientific society in the Colony. Its formation marks the beginning of Australian science as distinct from scientific work carried out in Australia by visitors. Douglass, a member of the Royal Irish Academy, was present at the inaugural meetings; he was the natural choice for secretary. However, in spite of the aims expressed in the opening prospectus[14]—which might well be read again each year before every scientific society in Australia, being as true today as then—and although Sir Thomas Brisbane on his arrival in the Colony accepted the office of president of the society, neither the objects of the members in forming the society, nor Brisbane's influence and the important astronomical research which he was carrying out at his observatory at Parramatta, were sufficient to keep the society in existence, and the meetings continued for only a little over a year. There were too few members, and no doubt they saw too much of each other in their daily life. Douglass was also a member of the Agricultural Society of New South Wales, and was one of those who signed the memorial sent to Earl Bathurst in September, 1822, protesting against the duty on Australian wool imported into England.

Douglass's philanthropic interests led him to take part in such work from the time of his arrival in the Colony. He was associated with the Benevolent Society of New South Wales from 1821, serving various terms as a vice-president; he was medical attendant at the Female Orphan School, and a member of the committee of that institution from 1824 until 1826. It is of interest to quote from the report in the *Monitor*[15] on a meeting of friends of the Benevolent Society held on June 30, 1826; it shows not only his outlook, but also gives a picture of the man:

> Dr. Douglas bestowed a warm panegyric upon the Institution, as described in the Report just read, and was astonished to think, in the present era of Christianity, how any person could object, as he believed some did, to institutions of this kind *upon principle*—Mr. E. S. Hall joined in the eulogiums of the last speaker, but endeavoured to account for the sentiments of the persons alluded to by Dr. Douglas, by describing the extremes of philanthropists, who being inspired with the feelings of the immortal Howard, had carried prison-improvement and benevolence so far, as to cause the gaol to become a premium for crime. . . Finally, Doctor Douglas rose again to put the finishing stroke to Mr. Hall's philosophy; but on finding that gentleman had had the prudence to decamp, he spared many of those arguments, which otherwise would have overwhelmed the unfortunate discriminator [between virtuous poor and vicious poor] with dire confusion.

But Douglass's public life was not confined to Parramatta and to his philanthropic and scientific activities, for his services were also made use of by the Colonial administration. In February, 1824, having been nominated Commissioner of the Court of Requests on the promotion of Stephens to the Supreme Court, he was sent to England for instruction. During that visit he reported to the British Government on the state of the Colony, and the letter of introduction which Brisbane wrote to Under-Secretary Horton[16] said of him:

> Dr. Douglas . . . is eminently qualified to give every insight you may require as to the state of the Colony, and as He possesses much of my confidence in regard to the views I have taken of the measures to be adopted here in future, He is instructed to withhold no information on any point you may require . . .; in every one of which He is more competent to detail with all the peculiarities in regard to the actual state of the Colony, or even to unfold the whole arcanum here, than any other Individual I could have selected.

Douglass found opposition in England, the Marsden faction being strong and having support from the Church, from several members at Westminster, from Barron Field and others; but their efforts to prevent his return to New South Wales were unsuccessful. He arrived back in Sydney in the convict ship *Mariner* in July, 1825, and in August took up the position of Clerk of the Legislative Council, to which he had been appointed by the Home

Government. In December, 1825, Darling replaced Brisbane, and a few months later Douglass was appointed to act as Commissioner of the Court of Requests, the position for which he had been sent to England for training in 1824. The *Australian* wondered why he had quitted the office of Clerk of the Council "to accept another, in no respect a better, either in point of honor or of profit. . . . Nothing indeed short of the conviction that the tenure of the former was insecure and fragile . . . can entitle it to be considered as the step of a reasonable creature . . .", and found fault with his new appointment because the Court would be "presided over by one not knowing the law, not pretending to the knowledge of one atom of it".[17] Apparently he occupied the position of Commissioner for only a short time, Stephens returning to it and Douglass becoming Clerk of the Council once more. There was talk of his resuming his duties as Commissioner when Stephens's commission as judge reached the Colony; but the *Monitor*, though having a high opinion of Douglass's work as a police magistrate at Parramatta, saw disadvantages in it, and remarked:[18]

> When Dr. Douglas succeeded commissioner Stephens in the Court of Requests, we had an opportunity of observing more distinctly, that integrity and superior talents are of little avail on the bench, unless the fixed rules of English law be brought to their support.

The *Australian* was more blunt:[19]

> We had much rather see Dr. Douglass following his own profession in the Colony, as he would thereby acquire both honor and emolument, than re-attempting the performance of inconsistent duties.

Douglass continued as Clerk of the Council for about a year,[20] but by the end of 1827 he was again Commissioner of the Court of Requests.[21]

Before this phase of Douglass's life is brought to a conclusion, some mention must be made of his association with the Bank of New South Wales. This seems to have been no more than an episode in the faction fight that was engaging the attention of the Colony, and though the independent development of Australia depended on its outcome, it meant the subservience of every appointment of importance to it. Douglass had had no experience of finance; yet, at the elections for directors of the Bank held on December 1, 1825, his name was proposed and he was elected, gaining the largest majority. He had not been mentioned in the Press as a candidate prior to the meeting at which he was elected, and it seems that W. C. Wentworth and his friends agreed to nominate him, and to support him rather than Prosper de Mestre (one of the leading merchants) so as not to split the vote. The report in the *Sydney Gazette*[7] has this to say about the meeting:

> Dr. Douglass and Mr. Pritchett (who were the popular candidates), were accordingly declared the Directors elect.
>
> The Meeting of the Bank Proprietors excited more interest than any Meeting within our recollection . . . The election, we understand, was conducted virtually, though not ostensibly, with reference to the politics of the candidates for the Directorship, rather than their eligibility for the office, as men of business. . .
>
> The speeches were numerous, and partook of the warmth which is natural in the present state of politics. Mr. Wentworth, jun., opened the discussions, we understand, by proposing Dr. Douglass, and recommending this Gentleman, with his usual eloquence . . . After the ballot . . . Dr. Douglass replied to the allusions made to him as a candidate, vindicating his claim to the Directorship, in a very able, as well as in a very gentlemanly manner. . . .

Later in the meeting he again spoke, "with much animation and real eloquence", pledging himself to the Bank's service in the terms that have already been recorded in a previous paragraph.

But even if politics were behind Douglass's election as a director, in the next two years he took an active part in the affairs of the Bank. Unfortunately, there are no detailed minutes of meetings of the directors, and one has to rely for information on the minutes of meetings of the proprietors and the reports of these in the newspapers; it is a pity that minute books in general contain only the bare decisions of meetings and seldom give any insight of the discussions. The times were difficult for the Bank. Macquarie had founded it as part of his policy to give the Colony a stable currency (sterling), but the Bank was now finding that it had to adjust itself to existence in a developing business community.[22] The problems that were to be faced in the two years of Douglass's directorship were (*a*) the reduction of the bank rate, (*b*) an increase in the Bank's capital, (*c*) the shortage of cash due to the export of dollars, (*d*) competition from other banks, and (*e*) the conversion of the Bank's charter into a deed of settlement for a joint stock company.

In the action taken to meet each of these problems Douglass seems to have taken an active part. He spoke often, and though his views were similar to those of his friends, he did not follow them slavishly. Thus, at the meeting to consider a reduction in the bank rate, Douglass "thought it would be strange policy in the Directors, who had money to sell, to ask a small price when they could with equal facility obtain a large one", a remark with which his friend W. C. Wentworth could not agree, pointing out that "the Bank was originally established for the public good", and "should not now descend into the feelings of a money-broker".[23]

Many of the motions put to Bank meetings during those two years were proposed by Douglass, a number of them being of major importance; it is clear that sometimes he was acting as spokesman for the directors. Douglass liked talking and did not lose his temper in debate; we have already read of his "very able . . . [and] very gentlemanly manner", and in other reports there are references to his "pleasant sparkling visage", and to his "considerable skill" in supporting a resolution.

At the meetings held to consider increasing the capital of the Bank, Douglass either moved or seconded the principal motions, though the sound financial comment came from others; Douglass was one of the deputation selected to discuss the proposals with the Governor; and when the deputation reported back to the proprietors and announced that the Governor had agreed to lend the Bank £20,000, it was Douglass who moved the acceptance of the Governor's conditions, and at later meetings moved resolutions arising out of them. When the question of allowing interest on deposits came up, Douglass was again heard; and finally, it was Douglass who moved the proposals concerning the conversion of the Bank into a joint stock company. Douglass lost his directorship at the ballot on November 7, 1827, Prosper de Mestre taking his place, but he was in the chair at a meeting of proprietors on December 12, 1827.

When that autocrat General Darling arrived in New South Wales, his mind had been prepared about the situation there, and Douglass was one of those whose enormities had been stressed. Barron Field and his friends had seen to that; in letters to Marsden Field wrote:[24][25]

> We rest all our hopes for the Colony on Darling & McLeay, if Scott's obstinately unfavorable view of the case of the Parramatta Magistrates blinds him to all Douglass's wickedness. . . .
>
> I have possessed the new Atty. & Solr. Genl. (Messrs. Baxter & Holland) with your merits, & have great hopes of their supporting the Magistracy & Civil Officers against faction & the convict newspapers. I hope Douglass will follow his friend Goulburn. . . .
>
> Genl. Darling's reception of the Address pleases me much. He, Macleay and Scott will form a strong union, supported by you, Campbell the Merchant & Jno. McArthur. . . . I look upon Douglass . . . as expiring with Brisbane & Goulburn. . . .

Things could not have gone well for Douglass after Darling's arrival. The new Governor was clearly out to break him, and Douglass's activities at the Turf Club dinner in November, 1827, provided the excuse.[3] By the following May Douglass had been forced to leave New

South Wales. After his departure, Darling wrote a private dispatch to Lord Stanley,[25] in which he said:

> I will further assure you that no man ever left a Country, who was less regretted. He is respected by no one, not even by those who made use of or associated with him, and his character is held in universal contempt, as a busy, intriguing fellow, who having arived here as an Assistant Surgeon on Half Pay, about six years ago, is now retiring from the Colony, having realised in this short period an Income of £1000 a year, being besides in possession of considerable Landed Property. The community will be materially benefitted by his departure and I hope soon to rid the Service of another of the same faction. . . .

FIGURE III.
Bronze medallion awarded to Douglass for notable services rendered in the cholera epidemic, 1832-1833. Possibly obverse.

Exile in France.

When Douglass sailed from Sydney in May, 1828, he intended to appeal at Westminster for reinstatement. But he was unsuccessful, and retired to France. Marsden was informed of this early in 1829:[27]

> Douglass is now residing in the South of France. He does not stand so high in Downing Street as he thought he should. You will have heard long ere this that Government would not reinstate him. His character is just as much sunk as yours is exalted by the late exposure thro your Pamphlets. . . .

Douglass was in France for nearly twenty years. Apart from some correspondence about his land grant in New South Wales,[28] a letter to his friend the Reverend Thomas Reddall[3] and a statement by F. L. S. Merewether that he had known him in France,[29] there are no records available in Australia relating to this period of "exile". However, material examined during a recent visit to France has provided sufficient information to give a general picture of his activities during that time.

The first record is for Paris in 1832. At that time an epidemic of cholera was ravaging Europe.[30] The epidemic reached France rather late, and it was not until March, 1832, that the first cases were reported in Paris. Douglass was living in the city, in the *quartier du Luxembourg*.[31] The story of the cholera epidemic in that district of Paris, which was one of the most heavily hit, with a mortality of 28 per thousand compared with the average of about 22 per thousand, has been told by H. Boulay de la Meurthe,[32] president of the health commission of the district and director of its bureau of assistance, a man who was later to become a vice-president of France and a distinguished educationist. Douglass is listed in this history among the doctors of the district (page 49); he is recorded as being compelled to give up his work on account of illness and could not resume (was he one of those attacked by the cholera?), and he received the following commendation (page 51):

> *MM. les docteurs Douglas, anglais, médecin extraordinaire du roi d'Angleterre, et Montanari, réfugié Italien, ont servi avec un zèle aussi actif que les médecins nationaux.*

Clearly, he was highly thought of, and his was one of the names submitted from the district to the commission which awarded medals to those, medical men and others, who had rendered notable service during the epidemic. This medal was of bronze, about 7 cm. in diameter, and on one side three figures were modelled in relief—on the left a female figure representing the city of Paris, on the right Æsculapius, and between them a sufferer from cholera, with the words "*générosité*" and "*dévouement*".[33] Although the awards—there were a thousand names in the list—came in for much criticism in the medical Press on the grounds that many received the award who had done nothing, and many did not who had given devoted service, there is no doubt that the award to Douglass was merited, particularly when one remembers that as a foreigner there was no stimulus to remember him.

Some time prior to July, 1835,[4] Douglass removed to Le Havre, the important port at the mouth of the Seine. The earliest record of him in the *Almanach du Havre* is for the year 1836, when he is listed as an English doctor living in the suburb of Ingouville; the last entry is for the year 1848.

FIGURE IV.
Reverse of bronze medallion, with name of Douglass inscribed; 7 cm. in diameter.

In the *Almanach du Havre* for 1839 there is also the following entry relating to Douglass:[34]

> *Hôpital des Étrangers, à Ingouville.*
> *Établi en 1837 pour les marins étrangers malades ou dans le besoin, sous la surintendance médicale du docteur Henry G. Douglass, membre du collège royal de médecine et du collège royal de chirurgie de Londres, membre de L'Académie royale et autorisé par ordonnance du roi des Français.*

The entry, which varies a little over the years, remained in the almanack up to 1850, although for 1849 and 1850 it merely states that the hospital is for the reception of sick or injured sailors and needy foreigners. The hospital, which was first situated in Ingouville, was moved to the suburb of Graville some time between 1845 and 1848. The committee of management comprised at first eight and

later eleven of the town's merchants and shipowners, with the American Consul as its president up to 1842. The date of foundation of the hospital is not quite clear; while most entries give 1837, the almanack for 1848 shows 1836. No information about the foundation could be located in the *Journal du Havre*, but two entries in this newspaper are of some interest. These relate to a Negro seaman injured in a brawl, who was sent to the hospital early in July, 1837. A translation of the paragraph in the issue of July 6 is as follows:

> The Negro sailor wounded in the face on July 4th has been taken to the *Hospice des Étrangers* and is being cared for there. This hospital was founded recently at Ingouville, and is under the direction of Dr. Douglas, authorised by government to practise his profession in France. This new establishment, which owes its creation solely to motives of humanity and which is maintained by means of individual gifts made to him, promises to render considerable service to sick foreigners, with whom it is sometimes necessary that the doctors in charge of their treatment are familiar with their own language.

Return to New South Wales.

It was not until October, 1848, that Douglass returned to Sydney, coming out as surgeon on the emigrant ship *Earl Grey*.[28] He was then aged 58 years. He lived in New South Wales from that time until his death in 1865. K. Macarthur Brown has dealt with this period very fully.[1,2] Douglass became associated with Sydney Hospital, he took an active part in philanthropic work, he was a prime mover in the foundation of the University of Sydney, he was concerned in the rebirth of the Colony's scientific societies,[35] and he engaged actively in political life, originating several measures of importance.

Perhaps it is a fitting conclusion to quote from his obituary:[3]

> We have no desire to offer excessive eulogy to the memory of the dead. It is never necessary to friendship to represent men as perfect models, who were themselves deeply conscious of infirmity, and would have set no value on indiscriminating praise. To have lived a long and useful life, with no great faults, to have maintained the reputation of benevolence for half a century by numberless acts of kindness daily repeated, to have added something by cheerfulness of temper to the pleasures of society; to have enjoyed the confidence and goodwill of some of the best beings who ever lived on earth, is to have given and enjoyed much compensation, whether for good or evil. This was indeed the lot of Dr. Douglass, whose cheerful voice, and kindly humour, and instructive conversation, many among us will regret that they will hear no more.

Acknowledgements.

Dr. K. Macarthur Brown has generously made available to me information about Dr. Douglass, and has read and criticized this paper at various stages of its preparation. I am indebted to the Bank of New South Wales for making available to me the minutes of meetings of the proprietors of the Bank as they relate to Dr. Douglass, and to Miss P. Quinn, the Bank's archivist, who went to much trouble to give me an insight into banking at that period. Miss Hazel Hunter has found literature for me and has helped in many ways. Miss Rosemary Holliett has kindly obtained information for me in Dublin. I should like to thank Mr. James Jervis for reading the manuscript, and the staff of the Mitchell Library for assistance. I am very much indebted to Mr. D. S. Macmillan, Archivist of the University of Sydney, and to Dr. Macarthur Brown for allowing me to reproduce the photographs used in Figures I-IV.

References and Notes.

(1) BROWN, K. M. (1937), "Medical Practice in Old Parramatta", Sydney.

(2) BROWN, K. M. (1943), "Doctor Douglass and Medical Sociology", MED. J. AUST., 1: 455.

(3) *Sydney Morning Herald*, December 2, 1865. His arrival home was fixed in his mind, because the next morning his sister told him the news of the murder of the English Prime Minister, Perceval. This happened on May 11, 1812.

(4) The List of the Members of the Royal College of Surgeons in London for 1816 gives his address as Caher, and that for 1820 as Dublin (the lists for 1817-1819 show only the London members). His pamphlet on typhus[5] is dated December, 1817, from Merrion-row, Dublin, and shows that he had been in Dublin at least since the beginning of the previous month. When he was listed in 1820 as a Licentiate of the Royal College of Physicians of Ireland, his address was William Street, Dublin.

(5) "Hints on the Best Means of Security Against the Prevailing Epidemic", by Henry Grattan Douglass, M.D., Member of the Royal College of Surgeons, London, and late Medical Superintendent of the Cahir Fever Hospital and Infirmary (Dublin, 1817). There is a copy of this pamphlet in the National Library of Medicine, Washington, U.S.A.

(6) *"Dissertatio medica inauguralis de origine causis et natura morbi epidemici, qui nuper in hac insula grassatus est", Pro Gradu Doctoris in Medicina, in Collegio Sanctae Individuaeque Trinitatis, Eblanam juxta, rite consequendo. A. Henrico Grattan Douglass, Socio R.C.S. London, &c.* (*Eblanae* [Dublin], 1819.) This thesis was evidently printed some time after Douglass was awarded his doctorate (*vide* reference 5). As a result of inquiries kindly made for me by the Director of the National Library of Ireland, a copy of this rare pamphlet was located in the library of the Royal College of Physicians of Ireland.

(7) *Sydney Gazette*, December 5, 1825.

(8) Letter from Douglass to Reverend Thomas Reddall, London, July 13, 1835 (Mitchell Library):

> We know not where the rage for reforms will lead. No man can tell the end thereof. It is singular, but I assure it to you as a fact, that the Americans themselves see this *run*, not *march*, towards Democracy in England with regret. Reform with us was necessary, but now they are going too far—I mean the desires of the people are running too fast, and even the "par excellence" most liberal govt. can neither check them nor keep pace with them.

This same letter also discloses that Douglass and his family were then living in Le Havre, his daughters Emily and Mary being with him there, and that his son Arthur was studying for the ministry at Trinity College, Dublin.

(9) Macquarie to Bathurst, July 24, 1821, *Hist. Rec. Aust.*, 10: 538.

(10) "Dr. Douglass and Mr. Howe", *Murray's Austral-Asiatic Review*, 1: 431 (August, 1828).

(11) The house rented for Douglass at Parramatta belonged to D'Arcy Wentworth.

(12) Marsden to Pratt, July 12, 1823, complaining that Douglass would not allow the children at the Female Factory to be baptised, or the women to attend church (Mitchell Library).

(13) Chief Justice Forbes to Horton, October 30, 1825 (Mitchell Library).

(14) Minutes of the Philosophical Society of Australasia, 1821-1822, *J. Proc. roy Soc. N.S.W.*, 55: lxvii.

(15) *Monitor* (Sydney), July 7, 1826.

(16) Brisbane to Horton, February 21, 1824, *Hist. Rec. Aust.*, 10: 624.

(17) *Australian* (Sydney), March 2, 1826.

(18) *Monitor*, August 4, 1826.

(19) *Australian*, July 26, 1826.

(20) Notices signed by Douglass as Clerk of the Council have been noted in the *Sydney Gazette* in July, 1826, August, 1826, and May, 1827.

(21) There is an advertisement in the *Monitor* for November 12, 1827, in which Douglass gives notice of courts to be held in January, 1828.

(22) BUTLIN, S. J. (1953), "Foundations of the Australian Monetary System, 1788-1851", Melbourne University Press.

(23) *Sydney Gazette*, January 26, 1826.

(24) Barron Field to Marsden, London, February 27, 1826 (Mitchell Library).

(25) Barron Field to Marsden, London, July 28, 1826 (Mitchell Library).

(26) Darling to Stanley, May 24, 1828 (Mitchell Library).

(27) Jno. Richardson to Marsden, London, April 4, 1829 (Mitchell Library).

(28) Governors' dispatches, 1830-1841 (Mitchell Library).

(29) MEREWETHER, F. L. S. (1898), "Reminiscences", privately printed. Also quoted by Barff, H. E. (1902), "A Short Historical Account of the University of Sydney", Sydney. Merewether states that it was in 1842 that Douglass returned to New South Wales, but this is clearly forgetfulness when he wrote so many years later.

(30) CHEVALIER, L. (1958), *"Le choléra la première épidémie du XIX^e siècle", Bibliothèque de la révolution de 1848, Tome* XX.

(31) This is the locality of the *Sorbonne, École de médecine, Palais de justice* and *Luxembourg*, and at that time formed part of the eleventh district; it is now part of the modern sixth district.

(32) BOULAY DE LA MEURTHE, H. (1832), *"Histoire du choléra-morbus dans le quartier du Luxembourg"*, Paris. A copy of this pamphlet was seen in the library of the *Académie nationale de médecine* in Paris, where there is a magnificent collection of nearly two hundred books and pamphlets dealing with this epidemic. There is also a great deal of information relating to it in the French contemporary medical Press.

(33) On the medal awarded to Douglass, a photograph of which I have seen through the courtesy of Mr. D. S. Macmillan, Archivist of the University of Sydney, his name is spelt *Douglas*, as is usual in the French records.

(34) The professional qualifications attributed to Douglass in French records apparently represent translations of his British qualifications. *"Médecin extraordinaire du roi d'Angleterre"* has not been traced to any official title or occupation; does it refer to his earlier public appointments in Ireland or, more probably, in Sydney? *"Membre du collège royal de médecine"* probably refers to his licentiateship of the College of Physicians of Ireland (he was not a member of the Royal College of Physicians of England, or of the Royal College of Surgeons in Ireland). *"Membre de l'Académie royale"* does not refer to the *Académie royale de médecine* (now the *Académie nationale de médecine*) of France, for Douglass was not a member of that body and had no association with it; could this refer to his membership of the Royal Irish Academy? *"Autorisé par ordonnance du roi des Français"* refers to his official permit to practise medicine in France; this could not be checked, as the official records for Paris were destroyed during the siege of the city in 1870.

(35) Douglass was honorary secretary of the Australian Philosophical Society from 1850 to 1855, and one of the Honorary Secretaries of the Philosophical Society of New South Wales from 1855 to 1857.

CARCINOMA OF THE LUNG — RESULTS OF TREATMENT.[1]

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LUNG CANCER has been described as progressing rapidly through latent, silent, urgent and rampant stages (Overholt and Atwell, 1959).

The presence of early lung cancer and other intrathoracic disease may be first suspected from a routine radiographic examination of the chest. Now that the public has been conditioned to the value of this examination, it would be prudent for the medical profession to advise patients to submit to a periodic X-ray examination, especially males over 40 years of age with chest symptoms, since an abnormality revealed by this procedure may indicate the presence of disease at an early and often curable stage. In a recent study of 71 cases of circumscribed silent intrapulmonary lesions, 28 were proven at operation to be carcinomas (Nicks, 1960). It is generally accepted that the chance of "cure" by surgery is greatly increased by early surgical exploration.

Apart from prophylaxis and concentration on early case finding, two most profitable lines for investigation would seem to be research into (i) means whereby the immunological response of the host to his tumour can be increased and (ii) the discovery of biochemical substances so capable of injuring cancer cells without harm to the patient, that they lose the power of propagation and become sensitive to this immunity response.

The 1960 International Cancer Congress in Melbourne has provided an opportunity for the review of the present results of management of cancer of the lung at the Royal Prince Alfred Hospital, Sydney.

Material.

All cases of carcinoma of the lung (670) seen at this institution from July, 1950, to December, 1959, were studied. Survival rates were calculated by the life-table method in all cases, excluding all hospital admissions during 1959. Of the 549 patients treated up to the end of 1958, all but one were successfully followed.

These cases form an unselected group referred to a teaching hospital, and include both histologically proven and clinically diagnosed cases, the latter being included to obtain a fuller perspective of the problem.

[1] Expanded from a discussion on lung cancer delivered at the plenary session of the International Cancer Congress in Melbourne, 1960.

Results of the Survey.

In the whole series, only 16% of the patients survived one year after the diagnosis was made; 8% survived two years, and 3·5% survived five years.

Up to 1958 nearly 50% of all patients received no specific treatment, and the over-all resection rate during this period was only 15%. The resection rate has been steadily rising over the years and in 1959 it was 22%.

TABLE I.

Survival Rate of Patients Treated from July, 1950, to December, 1958 (Calculated by Life Table Method).

Type of Treatment Given.	One Year. (%)	Two Years. (%)	Three Years. (%)	Four Years. (%)	Five Years. (%)
All patients ..	16·2	8·4	5·9	5·0	3·5
Resection	58·3	45·8	39·6	32·6	24·4
Thoracotomy only	20·0	6·7	3·4	3·4	0·0
Thoracotomy and radiotherapy and/or chemotherapy	27·9	16·7	11·1	11·1	5·6
Radiotherapy and/or chemotherapy	12·0	1·3	0·0	0·0	0·0
No treatment ..	5·0	1·4	0·3	0·3	0·0

The histological type of carcinoma was anaplastic in 38% of cases, squamous in 24%, adenocarcinoma in 8%, alveolar-cell in 1%, and unknown in 29%, because of the inclusion of cases with clinical diagnosis only.

Resection was possible in 36% of the cases of squamous carcinoma, 18% of the adenocarcinomas, 13% of the anaplastic carcinomas and in five out of seven cases of alveolar-cell carcinoma.

TABLE II.

Treatment Given at Different Periods.

Type of Treatment.	July, 1950–December, 1958.		1959.	
	Number of Cases.	%	Number of Cases.	%
Resection	80	14·5	26	21·5
Thoracotomy only ..	30	5·5	4	3·3
Thoracotomy and radiotherapy and/or chemotherapy ..	18	3·3	6	5·0
Radiotherapy and/or chemotherapy	152	27·7	39	32·2
No treatment	269	49·0	46	38·0
Total	549	100	121	100

Of 200 patients with anaplastic tumour treated before 1959 only four are alive, while of 133 patients with squamous carcinoma 19 are alive.

Of the 60 patients with anaplastic tumour treated before 1955—that is, more than five years ago—only six had resections; there has been one survivor of this group.

TABLE III.

Histological Types of Tumours Seen from July, 1950, to December, 1959.

Histological Type.	Percentage of All Tumours.	Percentage of Tumours of Known Histological Types.
Anaplastic	38·3	54·0
Squamous-cell	23·9	33·8
Adenocarcinoma	7·6	10·8
Alveolar	1·0	1·4
Unknown	29·2	—
Total	100	100

Of 46 patients with squamous cell carcinoma, 11 had resections, and of these five are still alive. Of the 24 patients with adenocarcinoma who were followed, five had resections and only one is alive.

The survival rate for resection cases in our limited series is 58% for one year, 46% for two years, and 24% for five years. In this period there were no five-year

survivals of untreated patients or of patients treated by radiotherapy and/or chemotherapy. Inoperable cases only were selected for radiotherapy. Of 131 patients, two survived two years, but all were dead after three years. All patients treated by chemotherapy died within two years of diagnosis.

Pathology in Relation to Prognosis.

In assessing a prognosis for a particular patient, the size and extent of the tumour, the pathological type and the anatomical position are important factors. To make figures from different centres comparable, the adoption of a standard classification is desirable (Sulzer, 1951).

At the Royal Prince Alfred Hospital the incidence of anaplastic carcinoma was more than one and one-half times that of squamous-cell carcinoma and five times that of adenocarcinoma. The figures for anaplastic carcinoma would probably be higher if the histology of the carcinomas diagnosed on clinical evidence was known. In Ochsner's series (1960) the incidence of squamous-cell carcinoma was nearly twice that of anaplastic tumour and nearly three times that of adenocarcinoma.

It is well known that the prognosis varies with the different histological types of tumour, the anaplastic carrying the worst prognosis. Adenocarcinoma and squamous-cell carcinoma have been found to have a similar prognosis (Bignall and Moon, 1955), but in the series at present reported, the survival rate has been higher in the squamous variety.

The chance of survival after successful surgery is seriously prejudiced by involvement of the draining lymph nodes (Borrie, 1952).

The occurrence of vascular involvement, either macroscopically or microscopically within the tumour mass, adversely affects the prognosis (Collier *et alii*, 1957).

The anatomical site of the tumour has been shown to be important in predicting the ultimate survival, the left lung (Carlisle *et alii*, 1951) and the lower lobes (Borrie, 1952) carrying a higher mortality.

Surgery offers no solution to the cancer problem in general, but it is at present the best treatment available for the patient with a lung cancer.

Although Brock (1960) claims that radical pneumonectomy (in which the whole lung, the draining lymph glands and part of the pericardium are removed) increases the five-year survival rate from 30% in cases of simple pneumonectomy, to 40% after radical pneumonectomy, he does not describe specifically his choice of operation for individual cases. His operative mortality rate for radical pneumonectomy is just over half that of simple pneumonectomy, which suggests that the more favourable cases have been chosen for the radical resection.

As no properly controlled study has been published, it is not possible to state whether a simple or a radical operation gives better over-all results in unselected cases, although the radical resection more closely approximates to the principles of cancer surgery.

The significantly lower immediate and long-term mortality rate for lobectomy in suitable cases (as compared with pneumonectomy) and the improved quality of the subsequent life after this operation have stimulated some surgeons to perform a lobectomy and so preserve functioning lung tissue, provided a proper radical excision of tumour and lymphatics is possible. With this in view, Price Thomas (1956) described the operation of sleeve-resection, in which the main bronchus is divided on either side of the lobar bronchus, well away from the tumour, and the remaining ends of the main and lobar bronchi are sutured together. This operation carries an 8% operative mortality (Johnston *et alii*, 1959) and a 60% two-year survival rate (Price Thomas, 1960). The operation has a limited but definite place in lung-cancer surgery.

It is emphasized that patients treated by resection belong to a highly selected and favourable group. It is difficult to compare the results of lobectomy and pneumonectomy, as these operations are based on individual preference for particular cases according to the pathology found, the age and the general condition of the patient.

Radiotherapy and Chemotherapy.

Bromley *et alii* (1955) reported that in early cases, in which treatment by radiotherapy was given before operation, neoplastic tissue was demonstrated in 50% of the operation specimens.

Hilton (1960) reports on the use of radiotherapy as the sole form of treatment of early (and presumably operable) carcinoma, and recommends it as the sole form of treatment for patients unsuitable for major surgery or declining operation. Of 38 patients, eight survived five years, but only one for nine years.

At the Royal Prince Alfred Hospital radiotherapy was used in inoperable cases only. All but two patients have died within two years of treatment. The quality of the remaining life was improved for many patients, especially those with mediastinal obstruction, pain from bony metastases or infiltration of the intercostal nerves. However, the relief of symptoms was short-lived and further improvement was less marked with subsequent courses of treatment. In our experience relief of pain from carinomatous involvement of intercostal nerves has followed intercostal nerve section.

Chemotherapy has been used to give palliation from mediastinal obstruction (Ben-Asher, 1949) and pleural effusion (Levine *et alii*, 1955), but in the present series remissions have been short-lived and all patients have deteriorated and died within two years of treatment.

Intravenous nitrogen mustard (0·4 mg. per kilogram of body weight), injected at the time of operation, has been put on trial for three years in an attempt to damage cancer cells circulating in the blood-stream after surgery (Morales *et alii*, 1957). The evaluation of this effect requires a long-term study of an adequate number of cases and controls.

Conclusions.

The present treatment for lung carcinoma is inadequate. The early diagnosis and prompt surgical treatment of doubtful lung lesions, which are still at an operable stage, is rewarding in many suitable cases. Resection offers the only chance of "cure".

The general adoption of a standard classification and registration of lung tumours would provide information of a significant statistical value.

A joint consultative tumour board consisting of a physician, a surgeon and a radiotherapist is likely to give the best advice to sufferers from lung cancer.

The time is ripe for the formation of a carefully planned medical research investigation, on a Commonwealth-wide basis, into chemotherapy for lung cancer.

Summary.

All cases (670) of carcinoma of the lung seen at the Royal Prince Alfred Hospital from July, 1950, to December, 1959, were studied. Anaplastic carcinoma was the most frequent type encountered (38%) and carried the worst prognosis (196 of 200 patients followed were dead at the time of the follow-up). The over-all survival rate in this series was 8% for two years and 3·5% for five years. Nearly 25% of patients who had resection of the tumour survived five years, but only in 15% was resection possible.

The resection rate has been increasing steadily over the years and in 1959 it was 22%.

Acknowledgements.

The work reported is that of physicians and surgeons of the Royal Prince Alfred Hospital and we would like to thank them for permission to use their figures. Our thanks are due to Professor H. O. Lancaster, of the Department of Medical Statistics at Sydney University, for his help in the statistical section of this paper. We would also like to thank Dr. E. F. Thomson for permission to study the hospital records, and Miss H. Moyle, Medical Record Librarian, for her help in the preparation and typing of this paper.

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A COMPARATIVE STUDY OF IRON ABSORPTION AND UTILIZATION FOLLOWING FERROUS SULPHATE AND SODIUM IRONEDETATE ("SYTRON®").

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SODIUM IRONEDETATE offers the advantage, especially useful in pædiatrics, of an iron-containing solution which is free of metal ions. Iron "sequestered" with the sodium salt of ethylenediamine tetra-acetic acid does not produce the reactions characteristic of ionized iron. Therefore a palatable syrup can be prepared without astringent taste and without the property of staining the teeth, both disadvantages of solutions containing ionized iron.

Since ferrous sulphate in tablet form is most widely used in the treatment of iron-deficiency anæmia, this preparation was used as the standard of comparison. In a preliminary trial undertaken to demonstrate absorption, the rise in the serum iron concentration after the administration of ferrous sulphate tablets was compared with that after sodium ironedetate syrup. Utilization was measured by the rise in hæmoglobin levels after the administration of each preparation to patients with hypochromic anæmia.

The first report of the successful use of chelated iron in the treatment of iron deficiency was not in animals or in man, but in grape-fruit trees in which it was used for the correction of chlorosis (Stewart and Leonard, 1952). Later Seeberg and his co-workers (1954) administered sodium ironedetate orally to a group of iron-deficient rats and compared the blood hæmoglobin levels with those of another group which was treated orally with ferrous sulphate. They reported that the iron from the iron chelate was absorbed from the gastro-intestinal tract and utilized for hæmoglobin regeneration in the anæmic rats at the same rate as iron from ferrous sulphate. The gastric and intestinal mucosa showed blackened areas after the administration of iron chelate, indicating that after oral administration it was broken down in the intestinal tract before being absorbed. This was confirmed by the fact that there was a poor hæmoglobin response in rats that received chelated iron intravenously. Once introduced into the body parenterally as the iron chelate, the metal ions remain attached to the complex nucleus and are not readily available to the body. Will and Vilter (1954) carried out an independent study to determine whether the distinctive properties of an iron chelate permitted it to by-pass the iron-acceptor mechanism of the gastro-intestinal tract, allowing a greater absorption of iron. The results of these studies confirmed the findings of Seeberg *et alii* — namely, that the iron chelate is split within the gastro-intestinal tract, releasing iron for absorption by the usual mechanism.

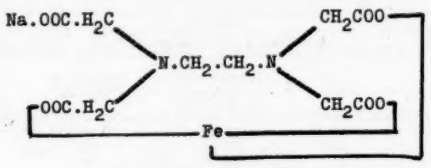

FIGURE I.
Formula for sodium ironedetate.

Lapinleimu and Wegelius (1959) performed iron-absorption tests after the administration of 152 mg. of sodium ironedetate and 132 mg. of ferrous gluconate to 18 infants. The increase in the iron values was in the same range for both preparations. Routine treatment of 402 children with sodium ironedetate showed an anti-anæmic response similar to that found with other iron preparations. Gastro-intestinal side effects were infrequent. Wegelius (1956) administered sodium ironedetate to 22 anæmic children and found a satisfactory antianæmic response. Herridge (1958) treated 10 patients with the same chelate and compared the effect with 20 patients treated with ferrous gluconate or ferrous succinate. Those receiving the chelate showed a significantly greater rise in hæmoglobin levels, but the dosage, in terms of elemental iron, was greater than with the other two salts.

Materials and Methods.

Iron Absorption Tests.

The test subjects were four adult volunteers and six adult patients suffering from hypochromic anæmia. The initial hæmoglobin levels of the volunteers were between 95% and 105% (Haldane[1]), while those of the patients were between 55% and 70%. Five of the 10 subjects were given ferrous sulphate tablets as a single morning dose; the other five were given sodium ironedetate syrup. One week later those who had received ferrous sulphate were given sodium ironedetate under identical conditions and vice versa. The serum iron level was estimated before the medication and then one, two, three, four, six and eight hours after the administration. The test subjects fasted for 10 hours before medication and during the eight hours of the estimations. Blood samples were coded, and the serum iron determinations were made without the technician knowing the identity of the subjects from whom the blood was taken, or the hour at which it was obtained. The amount of iron in either preparation given to a particular individual was identical on both occasions and was approximately 4 mg. per kilogram of body weight. There was a slight variation from subject to subject, owing to the difficulty of precise dosage when tablet administration is employed.

Therapeutic Trial.

All of the 98 patients studied were suffering from iron-deficiency anæmia, discovered on routine hæmoglobin estimation performed in a hospital out-patient clinic and in two institutions caring for some 3000 children. The diagnosis was confirmed by complete hæmatological examina-

[1] 100% Haldane = 14·8 grammes per 100 ml.

tions, and three additional determinations of the hæmoglobin values were made during the two weeks before treatment was started. Of the 98 patients 20 were adult women of child-bearing age, and 78 were children with brain damage between the ages of six and 14 years. Patients suffering from a severe loss of blood were excluded from the trial; in the 20 adult women the loss of blood at menstruation was not considered to be excessive. Any patient suffering from disorders of the hæmopoietic, gastro-intestinal, hepatic or renal systems was also excluded. The adults and children were classified in six groups according to the degree of anæmia present. These groups are detailed in Table I.

Alternate patients were given white ferrous sulphate tablets or sodium ironedetate syrup. The children received a total of 90 mg. of elemental iron in a day's dosage and the adults 180 mg. (A five-grain (300 mg.) tablet of ferrous sulphate contains 60 mg. of elemental iron.) The iron was administered in three divided doses after meals. Exactly half the patients in each group were treated with each preparation. When a group contained an odd number of patients the last one treated was not included in the results. No attempt was made to equalize subjects in respect to age within the pædiatric group itself or within the adult age group. The only criterion was the degree of anæmia.

TABLE I.

Classification of Treatment Groups.

Group.	Hæmoglobin Value. (% Haldane.)	Number of Patients.
I	45–49	5
II	50–54	9
III	55–59	7
IV	60–64	11
V	65–69	9
VI	70–74	8

The effects of therapy were judged by weekly hæmoglobin estimations, and expressed as a hæmoglobin percentage. The hæmoglobin estimation in individual patients was made on the same day, and at approximately the same time of the day, on each occasion. Side effects in children were recorded by a nurse, and in adults they were reported to the physician. Since many of the children were mentally deficient, the side effects could be judged only by observation.

Results.

Iron-Absorption Studies.

The increase in the serum-iron concentration showed a marked variation in different subjects, but the same individual showed a similar quantitative response after ingestion of both compounds. The mean percentage increase for the four volunteers with normal blood parameters, and that for the six patients with hypochromic anæmia following both preparations are shown in Figure I.

Therapeutic Response.

The increase in the hæmoglobin values after treatment is shown in Table II.

Side Effects.

Constipation and abdominal discomfort were reported by one of the 10 patients taking ferrous sulphate, and mild diarrhœa or constipation was reported by two of the 10 taking sodium ironedetate. Of the 39 children receiving ferrous sulphate, seven were reported by the nursing staff to be suffering from constipation or mild diarrhœa. Of an equal number receiving chelated iron, three were reported to be suffering from constipation or mild diarrhœa. Ten children vomited the sodium ironedetate and 17 vomited the ferrous sulphate on one or more occasions during the trial. Vomiting was not felt to be related specifically to the therapeutic agent since, in the experience of the nursing staff, it occurred after the administration of any tablet or syrup to this type of child. Staining of the teeth was carefully looked for, but was not noticed on any occasion.

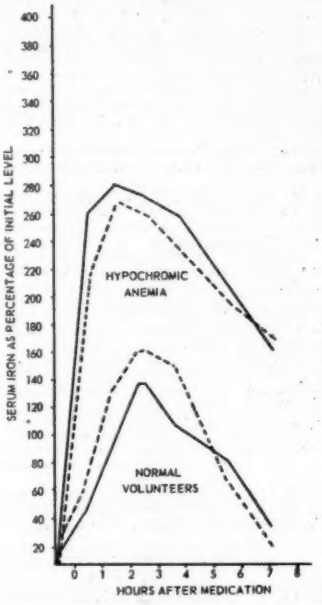

FIGURE II.

Mean increase in serum iron levels of four volunteers and six patients with hypochromic anæmia after the administration of 4 mg. per kilogram of elemental iron as sodium ironedetate or ferrous sulphate. Continuous line: sodium ironedetate; broken line: ferrous sulphate.

TABLE II.

Increase in the Hæmoglobin Level during the Ten Weeks following Initiation of Treatment with Sodium Ironedetate and Ferrous Sulphate.

	Range of Initial Hæmoglobin Levels. (% Haldane.)	Number of Patients.	Initial Mean Hæmoglobin Level. (% Haldane.)	Weekly Mean Hæmoglobin Level (% Haldane).									
				1	2	3	4	5	6	7	8	9	10
Patients treated with sodium ironedetate.	45–49	5	46	48	61	74	79	82	90	95	94	97	96
	50–54	9	51	56	67	77	84	86	90	95	96	94	97
	55–59	7	57	63	69	80	84	88	92	97	96	95	94
	60–64	11	64	69	72	80	85	91	95	95	97	95	94
	65–69	9	66	70	73	82	87	91	93	95	95	95	97
	70–74	8	72	74	82	85	91	94	96	96	96	96	97
Patients treated with ferrous sulphate.	45–49	5	47	50	63	71	80	84	90	94	95	94	96
	50–54	9	52	54	69	78	82	89	95	96	96	94	94
	55–59	7	56	63	75	78	85	88	92	95	96	96	95
	60–64	11	62	68	69	78	84	90	94	96	96	95	94
	65–69	9	67	71	74	80	88	93	92	95	95	96	96
	70–74	8	72	79	81	85	91	93	95	95	96	95	97

Discussion.

It was not considered necessary to make a detailed statistical comparison between the two forms of therapy used. It is evident from a study of Table II and Figure II that the absorption and utilization of the two compounds do not differ to a remarkable degree. Also it was not found valid to estimate the utilization of the iron, as has been done in previous papers, since the degree of response was considered to be related to the degree of anæmia originally present. When the original hæmoglobin level was below 50% the response to both preparations was more remarkable during the first few weeks of therapy. It was thought that various physiological variations in the hæmoglobin level and the laboratory error in its estimation would not permit any valid comparison to be made in cases in which the patient's hæmoglobin level was more than 75%. Many such patients were originally studied but were excluded from follow-up at a later date.

Summary and Conclusions.

1. A syrup of sodium ironedetate has the advantage over solutions containing free ionized iron in that it is free of an astringent taste and from a tendency to stain the teeth. A palatable syrup can therefore be prepared, which is especially useful in pædiatrics. The use of a syrup containing sodium ironedetate was compared in terms of absorption and utilization of iron to standard ferrous sulphate tablets. The dosage of both preparations contained the same amount of metallic iron.

2. Serum iron determinations were made both before and one, two, three, four, six and eight hours after the administration of both iron preparations to four volunteers and to six patients suffering from hypochromic anæmia. There was an increase in serum iron of similar degree after both preparations.

3. The hæmoglobin levels were estimated weekly for 10 weeks in 49 patients treated with the sodium ironedetate and in the same number treated with ferrous sulphate. Only patients whose original hæmoglobin level was less than 75% were included in the study. No difference was noted in the therapeutic responses to the two preparations.

4. Both preparations were well tolerated.

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THE PROBLEM OF FALLS IN AGED PEOPLE.

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MEDICAL and municipal authorities have been aware of the complex problems of old age for some time. No vitality pill has yet been discovered for postponing the dominant degenerative changes which take place at this time of life.

During daily domiciliary practice among patients of the upper age groups living in Kew, I have made a study of those branches of medicine and surgery which apply exclusively to old persons. The main objects of this paper are to deal with the problem of falls as they affect these old people, to show that it is a common enough problem to deserve careful thought on preventive measures, and, with the number of older citizens increasing annually in the community, to attract the interest of those engaged in the daily management of these people.

Not only have improvements in medical and social services in the last 60 years augmented the relative and absolute numbers of aged people, but, in spite of the immigration programme of the Commonwealth Government, which has brought many migrants of all ages to our shores since the end of World War II, the number of people in Australia past the age of 65 years has now reached 8·5% of the total population. In 1901 only 4% of Australian people belonged to this age group. A further increase therefore appears inevitable as the years go by.

Sheldon (1960), in pointing out that official circles define old age as beginning at 65 years in males and at 60 years in females, has shown that the proportion of old people in countries with unchecked fertility and mortality rates may be quite low; however, he has also shown that no fewer than six countries in Western Europe contained 10% or more of these people in 1954. Taylor and his associates (1959) have confidently suggested that 20% of the people of America will, by the year 1980, be 60 years of age and over. Table I shows that not only has there been a steady increase in the ratio of old people to the total population in the last 60 years in Australia, but that the ratio of old women to old men has increased during this period.

TABLE I.
People 65 Years and Over in the Total Australian Population.

Year.	Males *per Centum.*	Females *per Centum.*	Both Sexes *per Centum.*
1901	4·3	3·7	4·0
1911	4·4	4·2	4·3
1921	4·5	4·4	4·45
1933	6·4	6·5	6·45
1947	7·4	8·7	8·05
1959	7·3	9·7	8·5

Amongst hospital in-patients also there is an increasing trend to older age groups. A study of records from the Royal Melbourne Hospital reveals the presence of an increasing number of old people in this institution as in-patients in the last six years. This trend is believed to be widespread. Table II lists the average monthly number of patients over 60 years of age in the Royal Melbourne Hospital from 1952 onwards.

Definition.

Old age appears to represent that stage of life when a gradual involution of the physiological and biochemical mechanisms is occurring and when anatomical structures are in the process of atrophy. These trends are the opposite of those occurring in infancy, when evolution and growth predominate; but the home plays an important part in housing both old and young, and younger relatives, usually daughters, frequently manage the aged at home. Just as the ideal surroundings for the healthy development of the child appear to be found in the home, so it is anticipated that "private" rather than "community" homes will continue to be the abodes of the great majority of old people.

Investigation.

Persons in the older age groups, particularly those over 80 years, fall easily. In a series of 50 people examined during the last two years either before or after admission to the Methodist Homes for the Aged in Kew, 30 were 80 years of age or over, and it was impossible to find one person of this age group who had not fallen. The average age of all persons in this series was 81 years, the youngest being 65 years of age and the oldest 93 years. There were only eight males in this group. Many falls have occurred, and they have not always been reported at the time. The majority have occurred through the

TABLE II.
Average Monthly Number of In-Patients.

Age.	1952	1953	1954	1955	1956	1957	1958	1959	1960
60 to 70 years	154	168	149	148	158	166	175	177	174
Over 70 years	121	117	120	116	134	153	153	162	173

patient's slipping on or tripping over a mat in the bedroom or bathroom. Falls in the street have been rare.

These observations, which seem to apply generally in domiciliary practice, suggest that many of these falls are not necessarily serious. It may be that a mat or rug acts as a "shock absorber" and cushions the fall.

It has been pointed out by Exton-Smith (1955) that falls in the home are associated also with faulty environmental conditions such as careless design and poor maintenance, and with physical disturbances affecting the individual. Research into the physical changes occurring with age has revealed more extensive cerebral than muscular deterioration, which causes slower performance, perception and intellectual activity. Investigation has established that the changes lie essentially in the central control and guidance of actions. These conclusions, described by Welford (1958), point to instability with age, because the patient is unable to direct his actions with precision and accuracy. Following an intensive investigation, Sheldon (1948) concluded that many falls involving very old people were associated with a sudden failure of the brain centres controlling posture, caused by involutionary changes in the central nervous system.

Clinical Examination.

In an attempt to discover whether any particular physical illness was of importance, disorders found on examination of the whole series of patients have been recorded qualitatively as follows: (i) Diseases of the cardiovascular system (arteriosclerosis, cardiac failure, cerebral thrombosis and essential hypertension); (ii) diseases of blood (microcytic hypochromic anæmia); (iii) diseases of metabolism (diabetes mellitus, myxœdema and obesity); (iv) diseases of bones and joints (deformities, osteoarthritis, osteoporosis and rheumatoid arthritis); (v) diseases of the nervous system (herpes zoster, idiopathic epilepsy and paralysis agitans); (vi) diseases of the special senses (impairment of hearing and impairment of vision); (vii) neoplastic diseases (carcinoma of the breast, carcinoma of the cervix, carcinoma of the prostate and carcinoma of the stomach); (viii) infections (acute upper respiratory infections, including bronchitis, coryza, pharyngitis and tonsillitis, pyogenic skin infections and urinary tract infections).

It will be noticed that this list includes a variety of diseases which may play some part in the causation of falls. Nevertheless, as many of them occur in young people, it seems more likely that those changes described above, which are an integral part of the aging process, are the chief factors to be considered.

However, when an old person is admitted to hospital, other factors, including slow adaptation to the new surroundings, higher beds and distant toilet facilities arranged less conveniently than at home, are added hazards. A fall in hospital might well lead to serious bodily injury, as happened in three of the five cases described later. All hospitals must carry a moral responsibility, and probably a legal one as well, to patients and their relatives to ensure that reasonable care is taken to prevent falls.

During a survey in a British hospital group when the circumstances of 653 accidents were studied, Snell (1956) recorded an annual incidence of 18·5 accidents per thousand patients. He noted that 380 accidents (58%) were falls at the bedside. In a similar study in America Parrish and Weil (1958) noted an annual incidence of 25·7 accidents per thousand patients. It was stated that ward patients were more accident-prone than those in private and intermediate sections, where closer supervision obtained. Of these accidents 46% were falls at the bedside. These results show that falling at the bedside in hospital is not an uncommon occurrence, and a study of the following reports of cases bears this out.

Reports of Cases.

In these summaries, a description of the injuries suffered is given. All the patients were interviewed shortly after they had been returned to bed. Although this is a small series, the cases were collected recently during a very short period of time, and are described in order to reveal a serious problem. All the falls took place at the bedside. All the patients were away from their private homes when they fell. The first patient was resident at a home for the aged, whilst each of the others was in hospital for a physical illness.

CASE I.—Mr. A., aged 87 years, was found unconscious beneath his bed when breakfast was taken to him. There was no evidence of external injury, and general examination revealed no abnormality. He regained consciousness three days later, but gradually deteriorated to a state of drowsiness with phasic variations in the level of consciousness. A lumbar puncture revealed a clear, pale yellow fluid under normal pressure, containing increased globulin. The total protein level was 130 mg. per 100 ml. This man appeared to have had a subdural hæmorrhage, and a subsequent operation confirmed this diagnosis. His condition slowly deteriorated till he died from peripheral circulatory failure a few weeks later.

CASE II.—Mrs. B., aged 87 years, had a recently diagnosed gastric ulcer, and was admitted to hospital for medical treatment. In the early morning six days after admission she was found lying semicomatose on the floor beside her bed. Before the fall, another patient had seen her at her locker. Mrs. B. became restless and complained of frontal headache. Spastic weakness of the left leg muscles was present and the plantar response on that side was extensor. A lumbar puncture revealed a clear fluid under normal pressure, containing increased globulin, and the total protein level was raised to 87 mg. per 100 ml. A subdural hæmorrhage was suspected. As permission for a surgical investigation was refused by her relatives, this patient was discharged from hospital. She became bedridden and incapacitated, whereas she had been active and intelligent. She died recently, five months after her fall.

CASE III.—Miss C., aged 81 years, sought medical advice because friends had told her she was looking "yellow". General organic examination revealed no abnormality, but the mucous membranes looked pale. The hæmoglobin value was 35% (5·2 grammes per 100 ml.) and examination of a blood film revealed a hypochromic microcytic anæmia. Two nights after admission to hospital, Miss C. fell from her bed. She remembered waking and wanting to pass urine, but, in getting out of bed, had underestimated the distance to the floor, lost her balance and fallen. After a blood transfusion, this patient was none the worse for her fall. A barium-meal X-ray examination revealed a hiatus hernia to be the cause of this anæmia.

CASE IV.—Mrs. D., aged 86 years, had undergone an operation for a stone in the common bile duct. Three nights later she was found groaning on the floor by her bed. She stated that she "had decided to go away on a holiday and had left her bed to pack her bags". She complained of pain in the left hip joint and could not raise her left leg. Radiographic examination revealed the presence of an intertrochanteric fracture of the femur, and a further operation was performed to fix the fragments. Although three months have passed, this patient is physically and mentally incapacitated, and still requires hospital treatment.

CASE V.—Mr. E., aged 92 years, was admitted to hospital with bronchitis. Towards evening three days after admission he fell out of bed. He subsequently complained of pain in the right side of the chest over the sixth rib,

and a radiograph disclosed a fracture of this rib. The mental condition of this previously alert patient deteriorated after his fall, and has only recently shown signs of improvement.

Comments on Cases.

All patients were over 80 years of age, and, with the exception of the fifth patient, none had side rails on the bed before the fall. In Case V, a temporary guard 12 inches high was the only restraining device available, and it proved ineffective.

The second, third and fourth patients were in wards, whilst the other two were in single rooms. It is not known whether the first patient was sedated the night he fell. In Cases II and III aspirin was given, with chloral hydrate and potassium bromide (20 grains of each) later. In Cases IV and V no sedation was given. In Case II the patient was receiving sulphafurazole (two 0·5 gramme tablets every four hours), and in Case V he was having injections of benzyl penicillin (one million units twice daily). In Cases II and III the patients had apparently left their beds to pass urine, whilst in Cases IV and V dreaming appeared to initiate the action. In Case III the patient was emphatic in stating she would not have fallen had she been in a lower bed. Two major operations were performed in Case IV within ten days, surely a burden for a woman of this age.

Finally, the difficulties experienced in giving satisfactory explanations to the relatives concerned for the accidents in hospital involving the second and fourth patients need no further comment.

Summary.

Aged people are becoming more numerous in the community and are exposed to falls because of degenerative changes in the central nervous system affecting posture. Physical illness appears to be an important predisposing factor. In the home, slipping on or tripping over a loose mat appears to be common, and the injuries sustained generally are not serious. However, in hospital, high beds and distant toilet facilities are added hazards, leading to more serious falls which may result in physical injury and mental deterioration. The hospital patients fell within a short time of their admission. It is therefore believed that many old people are unable to adapt themselves quickly to unfamiliar hospital surroundings. Operative procedures and sedation are probably added factors in the causation of falls, but no definite evidence to support these impressions has resulted from this study. Four patients had accidents at night and one fell as evening was approaching, suggesting that darkness affects the ability of old people to remain stable.

Conclusions.

In an attempt to reduce the incidence of falls in old people, close supervision, particularly of those over 80 years of age and recently admitted to hospital, appears to be essential at all times. Special instruction in the principles of management of the aged should be given, not only to nursing staff in general hospitals, but also to relatives who are concerned with this problem in the home. A well-trained and interested staff will undoubtedly assist old people comfortably to adapt themselves to hospital routine. The personal touch contributes to a greater extent than is realized. The provision of lower beds with easily accessible toilet facilities is suggested. For patients over 80 years of age, side rails should always be fixed in position. One of the most satisfactory designs in use is constructed of tubular steel which blends with the bed design, and consists of two horizontal rails 15 inches apart, with vertical members at six-inch intervals, these rails extending from the head to the foot of the bed on each side. The attachment to the sides of the bedhead is by two bolts, and to the edge of the wire mattress by a hook. A dull light in wards would assist ambulatory patients to ring for help during the night if they desire to go to the toilet, rather than attempt to leave their beds unaided. This would also allow the nurse to obtain a clear view of the ward. At some future time, a photoelectric device may be useful to warn the nurse when a patient is attempting to leave bed. Finally, footwear with laces and flat heels should be kept in good repair and should not slip. People with deformities of the feet sometimes put off having shoes repaired because of the comfort they enjoy in worn-out footwear, and do not realize the hazards involved. Spectacles should be checked occasionally to see that vision is satisfactory, while in the home, slippery floors and poor design and maintenance should be avoided.

Acknowledgements.

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THIEVING IN CHILDHOOD.[1]

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THIEVING in childhood is a symptom frequently encountered in psychiatric practice. As its social implications are considerable, this survey of 16 cases may be of interest.

The survey includes 16 consecutive cases of children in the following age groups: five from six and a half to eight years, three aged nine years, and eight aged 10 and 11 years. Eleven were boys, and five were girls. The children were brought as behaviour problems. In nine cases thieving was the main feature, in the remainder it was incidental.

None of the children had been through the children's court. In several cases the police had been informed of the thefts in the hope that frightening the offender would effect a cure. No active punitive or segregational measures had been initiated.

In each case the thieving was sufficiently repetitive and serious to warrant investigation. Children with trivial lapses into theft were not included in the series.

Nature of Theft.

A description of the stolen goods gives clues as to motives. Our juvenile pilferers reveal a uniformity which suggests similarity of motives. The stolen articles were money in 11 cases, money and jewellery in two cases, money and pencils in one case, a rubber and pencils in one case, a watch and a bicycle in one case and toys in one case.

One need not be an economist to realize the importance of money. Children at any early age clearly glimpse that it provides a key to better living. Hedonists by intuition, they have a keen sense of certain emotional values. Security is an "evolutionary" must, hence the fierce desire to be loved as an early urge.

Whilst love and security are not synonomous, they are closely related. An unloved child feels insecure. Love

[1] Delivered at a meeting of the Clinical Society at the Brisbane Children's Hospital on November 15, 1960.

is not "Eros", but rather a counter of many values. It includes being made much of, being liked and being protected. For those who feel they are not loved, money is invaluable. It ensures popularity because one can share sweets, and it produces status because one can possess such gadgets as jewellery, sunglasses or a new bicycle bell. Such treasures are accessible to anyone with a lined pocket. If a child is penniless, theft is logical.

Evidence on which to base the above assumption is derived from direct questioning. Observation in the psychological laboratory of play in the sandpit, at the black-board and with toys and puppets corroborates the findings.

Further data rest on an appraisal of the family situation. If this tends to foster insecurity or the creation of a real or imagined rejection, the existence of an environmental climate conducive to thieving is indicated.

Our records suggest that insecurity, if not indeed rejection, is present in the majority of cases.

Adopted Children.

Six of the children had been adopted. In four of these cases there was intense rivalry towards the child who was born to the mother after her adoption of the thief. In each case there was firm evidence that the parents regretted the adoption.

In the fifth case, the adopted child had a chequered career. His life from birth had been one of many changes—from home to foster parent, to another home and another foster-parent. Continuity of affection was not possible.

The sixth child commenced life as an illegitimate war baby left by a flighty mother in the charge of a maternal grandparent. Exigency, not love, played the major role in adoption.

Step-Mothers.

Two children in the series had step-mothers. In one case the father had deserted the step-mother, creating great financial anxiety, about which she was extremely vocal. In the second case the father was undoubtedly to blame, in making invidious comparisons which the new wife hotly resented.

In both cases the advent of a second young family blighted the child of the first marriage for the young wife.

Unbalanced Discipline.

Six of the remaining eight children in our series reacted against unbalanced discipline. One child was fined so often that his pocket money ceased to be an asset; two others were subjected to erratic and disproportionately severe treatment from, in one case, an over-busy and efficient working mother, and in the other, by a psychotic mother.

One parent over-emphasized religion to the exclusion of playmates; another child was jealous of her mother's attitude to her son and this resulted in vindictiveness.

In this group stealing undoubtedly represented a vicarious attempt to wrest affection and security.

Conflict-Ridden Parents.

The remaining two cases combined destructiveness and stealing. Both these children—one boy and one girl—regarded their environment as implacably hostile. The mothers were unstable, and provided an unhappy, conflict-ridden family abode.

Treatment and Prognosis.

From the above, there is strong presumptive evidence that contributing to thieving is the feeling of being unloved, unwanted and insecure.

If this thesis is correct, the results of treatment should be confirmatory. With the provision of parental affection, thieving should cease, whereas in an unaltered environment thieving should continue.

Such a supposition is indicated by our findings.

Reports of Cases.

Cooperative Parents (Three Cases).

CASE I.—Dora revealed that she was grieving for an Indian amah who had cared for her in a milder and more affectionate manner than her adoptive mother. She also disclosed fierce jealousy of her step-brother. Her motives for stealing were revenge against her mother—"There's nothing makes her madder than losing money"—and the purchase of popularity undermined by acts of aggression at school.

CASE II.—Tom showed himself, in a line drawing, climbing a church roof. From that lofty vantage point he could see children playing with trolleys. Such joys were forbidden, as his parents confined leisure-time activities to church going. He revealed himself as a lonely child in a house with two busy adults. The thefts must be regarded as appointments with adventure and not as escapades of sin.

CASE III.—Jim, aged six and a half years, set up a dolls' house depicting a mother busily bathing and playing with a little girl of three years. The boy (himself) was left sitting in the sitting room after being told to "stay still". The rest of the pantomime included a scene in which his efforts to "help" his mother were repulsed, as she had not time to clean up his mess. In contradistinction the girl was given cups and asked to lay the table. She (his sister) was the favourite.

The parents' cooperation in the above cases was excellent. Both mother and father were keen to remedy their mistakes, and made considerable adjustments in their way of living, to convince the child that he was wanted for himself. Thieving has ceased.

Uncooperative Parents (Eight Cases).

In eight cases there is evidence that thieving persisted in spite of our efforts. The following case records are typical.

CASE IV.—Tom, who began life as an illegitimate State child, was ushered in and out of institutions and the home of a foster-mother until he was 14 years old. The foster-mother's own emotional adjustment was unstable; she afforded little security to this handicapped boy. Boyhood stealing continued into adolescence. He is now a confirmed delinquent, a drifter from job to job, and still a thief.

CASE V.—Peter, in the care of a newly-married father, was used by his father as a weapon against his wife. He even insisted that he accompany them on the honeymoon. Intolerable friction developed; step-mother supervision created persecution for the child. The boy stole money and the act was magnified as a major crime. He was condemned as wholly bad, and his scanty sources of amusement were closed. In an atmosphere of growing domestic misery, his stealing continued.

CASE VI.—Elizabeth, the daughter of an unpredictable, neurotic mother, was severly punished for hostility, and later for destructiveness and stealing. Regarded as incorrigible, the child was nurtured in an environment calculated to foster anti-social traits. The mother was completely uncooperative.

CASE VII.—Sybil's father deserted his family, leaving them destitute. The mother was a prey to endless fears of disaster, and emphasized money as the only remedy. She neglected to give affection to Sybil, who began to steal. The ineffective mother is incapable of altering her home environment.

The above samples reveal circumstances over which the psychiatrist has little control. Children exposed for a long period to a climate of rejection do not respond to an occasional statement that, in spite of everything, they are loved and wanted, particularly when evidence gleaned from their parents shows no change in the emotional *tempo*.

The task of educating the parents who are steeped in conflict, have a perpetual chip on their shoulders and lack the capacity for insight, is difficult. Platitudes are useless, and advice is often resented.

The correlation between continuance of insecurity in the child and the continuance of a detrimental parental environment is clear-cut.

Results Unknown (Five Cases).

In five cases it has been impossible to complete the follow-up. We do not know if the parents were cooperative, and whether the thieving ceased.

Comments.

The evidence brought forward indicates that petty pilfering in childhood is often associated with situations giving rise to insecurity or a feeling of rejection. If parents can be induced to change their line of approach—to be more demonstrative in their affections, more time-giving in their attentions, more realistic in facing the pocket-money problems or more generous in their appraisal of fundamental urges—thieving can be checked.

Unfortunately results do not lend themselves to statistical analysis. One cannot approach the children in an atmosphere of complete friendliness and trust, which is the appropriate psychiatric setting for successful therapy, and then ask for a week-to-week recording of thefts or suspicious incidents. None the less, it seems clear that thieving wanes under the influence of a correct psychological approach by cooperative parents with the aid of the psychiatrist to act as the prisoner's friend and ensure fair play.

The critical factor is parent cooperation. Whenever this is optimum, the results can be excellent, particularly if the thieving is recent, trivial and intermittent.

However, as parents are frequently not amenable to correction and environment cannot be altered, the tally of those for whom petty purloining is the opening gambit to other anti-social behaviour must be considerable.

It has been contended that as some children are constitutionally amoral, thieving could be a symptom of an inborn tendency. Such a supposition in our series would be speculative. None of the children were mental defectives. All knew the difference between "right" and "wrong". As in all cases the environmental climate was conducive to emotional maladjustment, it is reasonable to suppose that post-natal influences are of major importance.

Summary.

A review is made of petty pilfering in 16 children. There is an indication that insecurity and rejection are major ætiological factors. The prognosis is largely dependent upon parental cooperation.

HOW TO REMOVE FISH-HOOKS WITH A BIT OF STRING.

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I WAS taught to remove embedded fish-hooks by forcing the hook onwards until the point pierces the skin again, closing down the barb or breaking it off with a pair of pliers, and then drawing the curved part of the hook backwards along the curved track of entry, which is less painful and traumatizing than drawing the straight shank through a curved entry track. However, by the time I have anæsthetized the area (usually by a ring block of a finger), remembered where last I left my pliers and struggled to force the point of the hook out again (this is sometimes difficult, especially with a small hook deeply embedded), the procedure becomes a lengthy one lasting up to 20 minutes.

A much quicker method, described below is used by many of the fishermen in this district (near Port Vincent, on St. Vincent's Gulf), who are so able to flick the hook out, dip the finger in the sea and carry on fishing within a minute. Those of my medical colleagues whom I have asked have not heard of this method, and most of them have expressed disbelief in its practice.

Method.

A piece of ordinary string is made into a loop, the ends wrapped firmly around the manipulator's right index finger, and the loop, some 18 inches or 45 cm. long, is placed over the shank. The fish-hooked finger is placed upon a firm surface, the eye pointing to the left of the manipulator, who then grasps the eye and shank with the thumb and index finger of his left hand, which rests upon the patient's hand. He holds the shank rigid and depresses it. This disengages the barb and is painless, provided that the hook is not moved sideways. The string is slowly straightened out horizontally in the plane of the long axis of the shank. This is a trial run made for two purposes: (i) to make sure the string will not

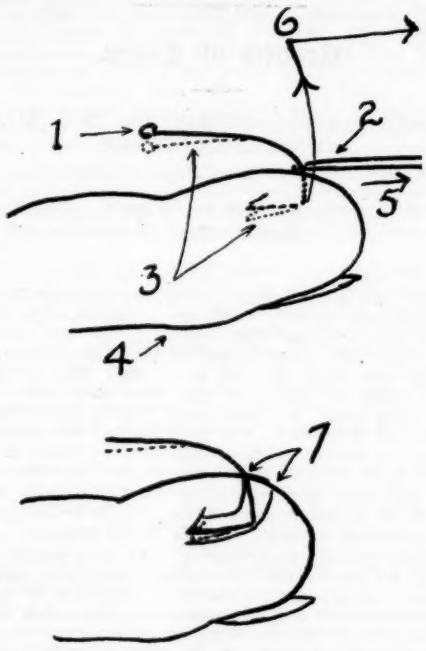

FIGURE I.

1. Eye and shank of fish-hook. 2. Centre of loop of string. 3. Effect of slight depression of shank, with subsequent disengagement of barb. 4. Patient's finger on bench. 5. Direction of sharp pull on string. 6. Direction followed by hook when string is jerked—that is, upwards, then far across the room. 7. Track of entry of barb and hook. Dotted line shows disengagement of barb with depression of shank.

tangle itself on the coat buttons; (ii) to bring the centre of the loop gently against the curve of the hook. The tip of the manipulator's left third finger then holds this central point of the loop of string against the juncture of the hook with the patient's finger. The manipulator's right hand is brought back to the hook and suddenly jerked away again, with full follow-through, in the same direction as in the trial run, spinning the hook back out of the finger without enlarging either the track or the hole of entry. For hooks larger than a size 1 whiting hook, a double loop and a loop length of 24 to 30 inches (51 to 75 cm.) are used. Full-sized snapper hooks present a quite different mechanical problem.

Results.

As most of the inhabitants remove their own hooks (using, of course, their own fishing line instead of string), I have been able to use this method on only three patients. It failed in one case, in which the point was almost presenting through the skin and when, I think, I had

failed to disengage the barb from the corium. Removal by the usual method was particularly easy even without a local anæsthetic.

The other two hooks were removed painlessly and with ridiculous ease in a matter of seconds. The husband of one patient announced irately that he was able to do it that way himself, but had driven his wife 27 miles to me "to have it removed properly"!

Acknowledgements.

I wish to express my thanks to Mr. C. W. Parsons, grazier, and Mr. N. B. Edwards, grain agent, for demonstrating this method to me.

Reports of Cases.

ADULT PYLORIC OBSTRUCTION DUE TO A MUCOSAL DIAPHRAGM.

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IN 1959 two contributions to British medical literature drew attention to the condition of obstruction of the pylorus by a mucosal diaphragm. They were those of Rhind (1959) and Chamberlain and Addison (1959). The latter authors were able to trace only four previously reported cases, and added two of their own, while Rhind reported four cases. An instance of pyloric obstruction due to a mucosal diaphragm was seen during 1959 in Sydney Hospital, the patient being a man, aged 53 years, who was admitted in a state of severe electrolyte imbalance.

It is felt that more attention should be paid to this condition, as it would seem likely that it is considerably less rare than the above remarks would suggest.

It should be stressed that a true diaphragm exists, composed of two layers of mucous membrane, and with a small central or eccentric aperture. This type of "benign" (though potentially lethal) pyloric obstruction is distinct from, and should not be confused with, gross cicatricial stricture of the pylorus or duodenum, antral mucosal prolapse, chronic hypertrophic antral gastritis and idiopathic pyloric muscular hypertrophy. There is a true diaphragm and not merely œdema of the mucosa. However, it is almost impossible to recognize the diaphragm in the post-operative specimen once the pylorus has been slit open. If the condition is suspected at operation, a search may be made by attempting to push a finger through the intact pylorus after gastrotomy or duodenotomy. It should be realized that the pyloric region may feel quite normal from the outside. The diaphragm is most commonly situated at the level of the pylorus, but diaphragms have been described which have been situated in the antrum a centimetre or two proximal to the pylorus.

An interesting and probably important feature is the common association of the diaphragm with a peptic ulcer in the stomach or duodenum. This led Rhind to suggest that a superficial mucosal ulceration leads to annular submucosal fibrosis, and that the fibrous tissue contracts after the manner of a purse string, thereby producing the diaphragm. Rhind has observed a linear ulcer on the free edge of the diaphragm, which strongly supports his view.

It would seem reasonable to expect that a lax structure such as mucosa would be "purse-stringed" fairly readily and by a degree of fibrosis far smaller than that required to produce a stenosis of the entire thickness of the pylorus. It may be that abnormal laxity of the mucosa predisposes to the condition.

Kinsella (1951) reported two cases of marginal mucosal erosions associated with pyloric obstruction, and attributed the obstruction to the contraction of a delicate fold of mucosa with circular and radiating muscle fibres resembling the iris of the eye. He considered that obstruction was due to an active contraction, or spasm, of this iris-like diaphragm, secondary to the marginal erosion. However, in each instance the pylorus was slit open before being examined internally, and the opportunity of assessing fully the condition present was lost. In the case reported here it would have been quite impossible to dilate the small central opening without tearing the diaphragm, and the condition was quite unlike a spasm. Further, in Digby and Chamberlain's first case it is interesting to note that the radiologist suggested that a spasm was present, but intramuscular and intravenous injections of propantheline did not lead to any improvement.

Another ætiological theory postulates a congenital cause. This may be reasonable in a patient presenting at or near birth, but seems less likely in the adults so far reported, whose histories have been relatively short, and whose average age has been in the sixth decade of life.

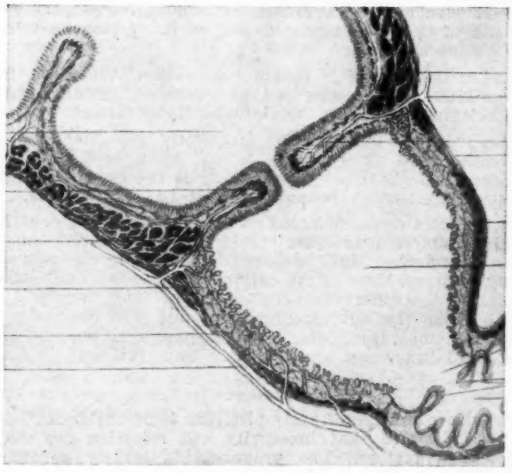

FIGURE I.

Diagram showing mucosal pyloric sphincter (from Cole *et alii*, 1932; reproduced with the permission of the author and by courtesy of *Radiology*).

The existence of a delicate, "iris-like" mucosal sphincter at the pylorus seems to have been suggested first by Cole (1932), and Figure I is a copy of an illustration from Cole's article. It seems reasonable to postulate that there are two pyloric sphincters with different functions. The "pyloric sphincter" of the anatomy books is a strong, muscular ring developed to oppose the powerful peristalsis of the antrum during mechanically active gastric digestion, while the submucosal sphincter operates while the stomach is at rest. During this phase it provides at minimum effort an adequate barrier to prevent undesired mixing of acid gastric secretion with alkaline duodenal contents.

If this view is accepted, established obstructive mucosal diaphragms in adults, such as the one reported below, are acquired, and result from quite minor degrees of fibrosis secondary to ulceration developing on some part of the "iris-like" second pyloric sphincter.

The influence of diet, both before the diaphragm has developed and after it has formed, has been stressed (Rhind, 1959). The soft or liquid diet taken by many ulcer patients may permit cicatricial contraction and stenosis where a rougher, more bulky diet would prevent or delay it. An analogy could be drawn, perhaps, with the anal region, where thin, liquid motions may favour the development of a stricture if, for any reason, this is threatened.

On the other hand, a patient who has developed a pyloric mucosal diaphragm with a small aperture may stop vomiting for a time when placed on a completely liquid diet.

Treatment is required for the vomiting and the consequent interference with nutrition. In most of the reported cases the obstructing diaphragm has been dealt with by partial gastrectomy (and, in fact, has usually not been recognized until subsequent examination of the specimen).

In the case encountered by the writer the duodenum and stomach were incised and the diaphragm displayed and photographed *in situ* (Figure II). As no active ulcer was evident anywhere in the stomach or duodenum, it was felt that a less radical procedure would suffice to deal with the obstruction, and a pyloroplasty was employed. Touroff and Sussman (1940) successfully treated a premature child, in whom a pre-pyloric membranous obstruction was found, by incision of the diaphragm and pyloroplasty.

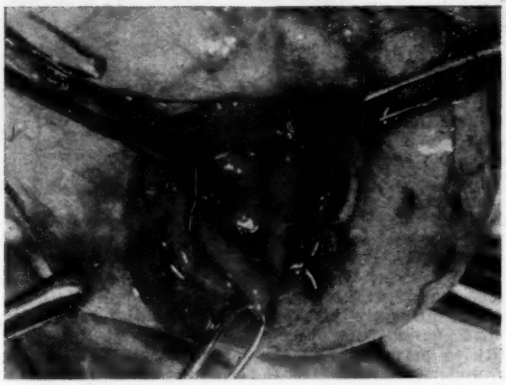

FIGURE II.
Pyloric mucosal diaphragm viewed through gastrotomy wound. A probe has been passed through the small opening in the diaphragm.

Clinical Record.

A., a dairy farmer, aged 53 years, was referred from a country hospital, where he had been under conservative treatment for progressively severe vomiting; as his condition was deteriorating he was flown to Sydney and admitted to Sydney Hospital.

Vomiting had commenced four months previously and had steadily grown worse. It occurred immediately or up to one hour after meals, and the vomitus was described as consisting of foul-smelling, undigested material. Anorexia and loss of weight were present, but no pain. During the five days preceding his transfer to Sydney, the patient had been observed to be extremely confused.

His previous illnesses included a duodenal ulcer 13 years before, which had been relieved by medical treatment, and the removal of a "bad" appendix 15 years before.

Examination showed a very dehydrated man with a dry tongue and sunken eyes. He had frequent hiccups; the abdomen moved on respiration; there was no visible peristalsis, and no tenderness or masses. A succussion splash could be elicited. The blood pressure was 90/60 mm. of mercury. The muscular power was poor. Despite the hæmoconcentration indicated by a hæmoglobin level of 16·3 grammes per 100 ml., and a total serum protein level of 8·7 grammes per 100 ml., the serum potassium level was only 3·2 mEq/l., falling the next day, as the blood volume was restored, to 2·7 mEq/l. The blood-urea nitrogen level on admission to hospital was 204 mg. per 100 ml.; a week later this had fallen to 20 mg. per 100 ml.

By parenteral therapy this patient's dehydration and electrolyte imbalance were corrected, with striking improvements in his mental state and his muscular power. As the serum potassium level returned to normal the patient would sit up in bed and proudly contract his biceps.

An opaque-meal radiographic examination was carried out, and was reported as suggesting "hypertrophic pyloric stenosis and dilatation of the stomach".

At laparotomy the findings were, at first, mystifying. There was a possible slight increase in the thickness of the muscle coat in the pyloric and antral regions, which appeared insufficient to explain the dilated stomach and the history. There was no evidence of past or present peptic ulcer. In the absence of convincing external evidence of pyloric obstruction it was decided to open the antrum so that the pyloric apparatus might be examined from within. It was found that it was quite impossible to pass a finger through the pylorus. The first part of the duodenum was then incised, and a similar block was found when an attempt was made to push a finger through from the duodenal side. By the introduction of fingers from above and below simultaneously it was easy to demonstrate that the cause of the obstruction was a thin flexible membrane.

A search was then made for an opening in the diaphragm, which was found only after several minutes, and which would admit nothing larger than a smallish probe (Figure II). The diameter of the opening could not have exceeded 2 mm.

As there was no sign of peptic ulceration and nothing to suggest neoplasia, it was decided to perform a pyloroplasty by joining the gastrotomy and duodenotomy incisions, and closing transversely. Once the diaphragm was incised in performing the pyloroplasty, it recoiled elastically and was no longer obvious. It is, perhaps, worth repeating that a mucosal diaphragm is unlikely to be recognized unless, before the pylorus is slit open, an attempt is made to pass a finger or an instrument through its lumen.

A small portion of the membrane and of the adjacent pyloric musculature were excised and submitted for histological examination. Dr. A. A. Palmer reported:

> Sections show gastric mucosa and muscle. The mucosa is a little inflamed. The muscle is œdematous and may be somewhat hypertrophic, and there is very slight fibrosis.

The post-operative progress of the patient was uneventful. Twelve months after the operation he wrote to say that he was well and had had no more vomiting.

Summary.

Attention is invited to the condition of mucosal diaphragm as a cause of benign pyloric obstruction, and its ætiology is discussed.

It is suggested that this abnormality is less rare than the number of cases reported would indicate.

It is stressed that the mucosal diaphragm will not be found unless it is looked for before the pylorus is slit open.

A case of pyloric obstruction resulting from a mucosal diaphragm is reported.

Acknowledgement.

For the photographs illustrating this article I am indebted to the Sydney Hospital photographer, Mr. R. A. Money.

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SEVERE DIABETIC KETOSIS IN A PREVIOUSLY NON-DIABETIC PATIENT FOLLOWING TREATMENT OF HIS MYXŒDEMA.

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THE sequence of events described herein would seem to be both sufficiently unusual and potentially serious as to warrant reporting.

Clinical Record.

The patient, a male, aged 42 years, was first seen on December 1, 1958. He gave a history of greatly reduced exercise tolerance from childhood days, so that after any appreciable exertion he would become very tired and would frequently fall asleep.

He had left school at the age of 14 years, when in Grade V. He had missed a good deal of school, but does not think he was very bright.

After leaving school, he was supported by his widowed mother (herself in very modest circumstances) until the age of 19 years, when he was granted an invalid pension for "heart trouble". Since then, he had existed as an invalid pensioner until a few days before, when the *status quo* had suddenly been shattered by a letter from the Social Services Department requesting him to present himself for possible rehabilitation and subsequent placing in suitable gainful employment. This had resulted in his paying an indignant visit to the local practitioner (who had never seen him professionally before) to obtain a certificate to the effect that rehabilitation would be out of the question. The doctor felt that there was more to the patient than met the eye and referred him for further investigation.

On inspection, the over-all impression was of a somewhat bloated, sleepy, hypotonic man looking older than his years and moving sluggishly. He slouched in his seat, speaking slowly in a rather deep, husky voice. His face was puffy, the eyelids and lips swollen and the skin pale with a lemony tint (Figures I and II).

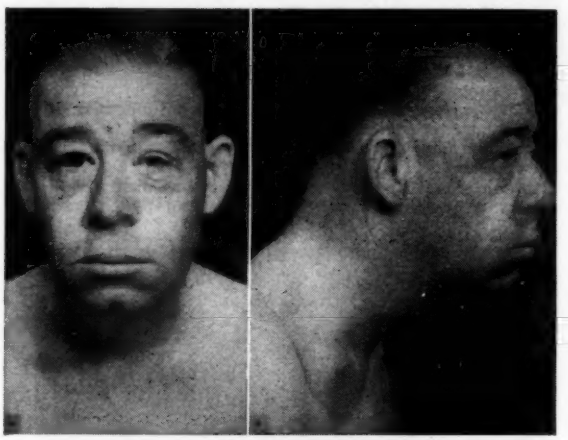
Although his cerebration was slow, his general intelligence and ability to converse seemed quite reasonable — especially in view of his minimal education — and certainly belied his appearance. He displayed a good sense of humour and was "quick on the uptake". He read the paper regularly and listened to the wireless. His hobbies were constructing valve radios (including an effort at a short wave set) and showing home movies (complete with sound track), apparently with a good deal of success. The necessary technical "know-how" for these pursuits had been gleaned from a home-science type magazine to which he subscribed.

He also admitted having had severe constipation all his life and said that his hair had been falling out for some years, so that it was now quite thin over the anterior half of his head. He disliked the cold intensely.

Physical examination was, in the main, non-contributory. His blood pressure was 95/60 mm. of mercury, his heart sounds were normal and his heart rate 76 beats per minute, with regular rhythm. There was no œdema, nor was there any palpable thyroid tissue. The genitalia were normal in every respect, as was his body hair distribution. The knee jerks were present and showed delayed relaxation. His auditory acuity was somewhat impaired. His weight was 11 stone 2 lb.

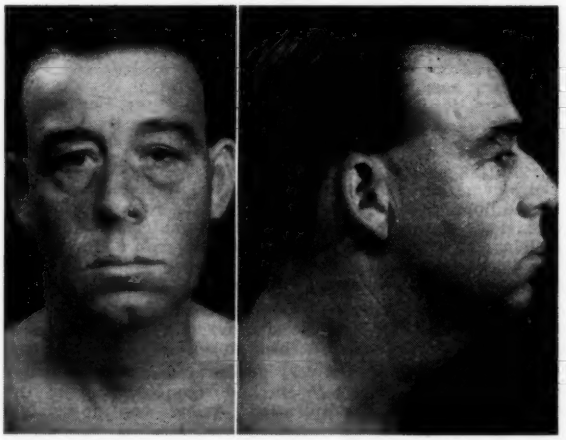
His urine contained no albumin, sugar or bile. His hæmoglobin value was 11·5 grammes per 100 ml. An X-ray examination of his chest revealed a normal-sized heart and clear lung fields. An electrocardiogram showed low voltage *R* waves and flat *T* waves in all leads. The serum cholesterol level was 370 mg. per 100 ml. and the blood-urea level 48 mg. per 100 ml. A radioactive iodine-uptake test confirmed the clinical diagnosis of myxœdema, the uptake being 5% in four hours and 2% in 24 hours.

Treatment with oral desiccated thyroid was commenced on December 7, 1958, and the dose was cautiously increased, so that he was having three grains daily by April 7, 1959. During this interval the expected improvement in exercise (and cold) tolerance had occurred and it would be no great exaggeration to say that he felt a changed man — so that he was now enthusiastically



FIGURES I AND II.
Full-face and profile photographs of patient taken on December 17, 1958 (10 days after the commencement of thyroid therapy).

indulging in activities (such as sea bathing) in which he had never before shown the slightest interest or ability to perform. His general appearance and hearing also underwent the expected changes (Figures III and IV) and his constipation lessened greatly. More vigorous head-hair growth developed and his voice and hearing improved. An electrocardiogram on February 11, 1959,



FIGURES III AND IV.
Full-face and profile photographs of patient taken on April 8, 1959.

showed the *T* waves to be much higher than in December, 1958. His weight dropped gradually so that on April 29, 1959 — that is, three weeks after commencing to take three grains of thyroid daily — it was only 10 stone and he actually appeared a little too lean. Otherwise he felt and looked very well and there were no signs of thyroid overdosage.

Two weeks later—that is, on May 11, 1959—he was found in his home stuporose, almost comatose and severely dehydrated, with a systolic blood pressure of 70 mm. of mercury. His breath (and the room) reeked of acetone. There was a small carbuncle on his upper lip. At this moment the significance of his recent rather too-lean appearance became all too apparent. A neighbour volunteered the information that he had been confined to bed for the previous two days with abdominal pain and vomiting.

He was rushed to the hospital, where urgent resuscitative measures were immediately instigated, and, although his urine (and blood) tests gave satisfactory results within six hours of his admission to hospital, it was nearly 48 hours before he regained control of his mental faculties and was able to give a coherent account of himself.

His blood-sugar level on arrival was reported as "greater than 500 mg. per 100 ml.", his serum bicarbonate level was found to be 13 mEq/l., his blood-urea level 222 mg. per 100 ml. and his total serum-proteins level 8·3 grammes per 100 ml.

Four hours after his admission to hospital, by which time he had received 550 units of soluble insulin, his blood-sugar level was still 485 mg. per 100 ml. and it was not till six hours after admission (and after a total of 870 units of insulin) that his urine (which initially had shown "four plus" of sugar and acetone) had cleared to "one plus" of sugar and acetone. He received a total of 6 litres of fluid intravenously in the first seven hours.

Five and a half hours after admission his blood-urea level had dropped to 187 mg. per 100 ml. and his total serum-protein level to 7·6 grammes per 100 ml. The serum bicarbonate level was now 20 mEq/l. Some 26 hours after admission his blood-urea level was 111 mg. per 100 ml. and next day (May 14, 1959) it was 58 mg. per 100 ml. His weight on May 17, 1959, was 8 stone 10 lb. An X-ray examination of the skull showed no abnormality, the pituitary fossa not being enlarged.

He was discharged on May 26, 1959, on a régime of 30 units of protamine zinc insulin each morning, a 1900 Calorie diet and 3 grains of thyroid daily. His weight on May 29, 1959, was 9 stone 6 lb. and he felt very well, although still rather weak. By July 1, 1959, his weight was back to 10 stone 1 lb. and he felt very well.

In September, 1959, he had his interview with the Social Services Department (the authorities had previously agreed to defer it, after having the situation explained to them), and in January, 1960, he became an ex-invalid pensioner—having substituted a steady job (returning some three times his previous "income"), 3 grains of thyroid and 28 units of protamine zinc insulin daily for his previous existence. He is (happily) quite content with the turn of events.

Discussion.

That diabetes mellitus can exist latently in a hypothyroid person and be "revealed" by making the patient euthyroid has been shown more than once in the literature (Baron, 1955; Bloomer and Kyle, 1959), but no cases appear to have been described in which the ensuing diabetic state was of such severity as to endanger seriously the patient's life. Such was certainly the case in this man.

It may be that the development of the diabetic state after the giving of thyroid to this patient was merely an odd coincidence. However, it does not seem unreasonable to postulate—in view of the great increase in metabolism (and therefore the demand for extra insulin) which occurs with attainment of the euthyroid state—that a latent and very nearly lethal diabetes was thereby uncovered.

The main purpose of this report, therefore, is to emphasize the fact, should someone else sometime be treating a patient with severe hypothyroidism and note that the patient is losing too much weight, that it would then be a good time to check the urine again for sugar.

Summary.

A case is presented of a male, aged 42 years, with long-standing myxœdema, who responded in the expected way to thyroid medication, but who, soon after becoming euthyroid, then nearly died from diabetic ketosis.

It is suggested that a close watch should be kept for the possible appearance of a coincidently occurring latent diabetic state in all severely hypothyroid patients who are being treated with a thyroid preparation.

Acknowledgement.

I wish to thank the Sisters of Mercy of the Mater Misericordiæ Hospital for permission to acquire and publish relevant data from the hospital records.

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INFANTICIDE—REPORT OF TWO CASES.

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Two cases are presented which show common features of some importance to the psychodynamics of the problem of infanticide.

Case I.

The patient was a housewife, aged 34 years, who had killed her nine-months-old child by suffocation and head injury; she was brought to the hospital while she was awaiting court proceedings and has remained in our care ever since.

Psychological testing showed her to be a tense, anxious woman of average intelligence (I.Q. 100 on the Wechsler Adult Intelligence Scale); projection techniques brought out poorly developed interpersonal relationships, and a high level of anxiety appeared when these relationships were discussed. She was largely aware of this problem, as she had a longing for social acceptance, but her attempts to obtain it were always hampered by feelings of inferiority and inadequacy. Aggression was not evident at this stage, although it built up steadily during the following months. Throughout the interviews she was always ready to talk about her past history—how she had been dominated by a rigid, critical mother, who, lacking any tender quality, had denied her love and human friendship. Not only did she blame the mother for a lonely childhood, but also because she had come between her and her father. She avoided the subject of her baby's death, and when it was deliberately brought up she showed neither remorse nor sorrow; overtly at least, she was concerned only with getting off with a token punishment at her coming trial. We were unable to find any evidence of psychosis or of a systematized neurosis, but her personality was immature and unstable, and contained passive-aggressive features.

She was the only child of ill-matched parents; the mother was cold, rigid and withdrawn, the father convivial and gregarious. Consequently, parental bickering was a daily feature of her life, while the mother's asocial attitude caused them to make frequent changes of neighbourhood. Eagerly sought friendships were lost in this way and schooling was made difficult. However, she did manage to pass the Intermediate Certificate examination despite this, and then she left school and entered a convent as a novice. This phase of her life lasted three years, and then she left the convent for the rather unusual reason that her fellow nuns were "too snobbish". An uneventful period as clerk and shop assistant followed, which was marred by the death of her father—a tragedy

to her, which still causes her grief when recalled. She was now lonelier than ever; she joined a "happiness club", through which she met her present husband, and they were soon married. However, in marriage she still did not escape maternal criticism, for the husband was a Protestant, and although he never made any attempt to influence his wife, the mother's Roman Catholic principles were outraged. Pregnancy saw an increase in maternal hostility with added threats directed at the baby's soul; nevertheless the patient went to term in good health and spirits. It was in the puerperium that she developed depression, which was apparently mild, and passed over with light reassurance by doctor, priest and husband, although she had related at confession that she had a growing fear that she might harm the baby. Alone in a rather isolated house, she began to brood over her lonely childhood, the death of her father, her mother's disapproval of the marriage, and the religious threat to the baby's soul. Identifying herself closely with the child, she imagined it going through the same miserable childhood as she had had; then came the frightening thought that "it would lose its soul and be exposed to eternal punishment", and although this would undoubtedly be her own fate, she reasoned, she must at all costs save the baby from it. Only its youth and innocence could ensure this; as a baby it could still go to heaven. So she killed it and went shopping.

The court placed her on a five-year bond. The husband, loyal and hard-working, accepted all the trouble without criticism, bought a plot of land in a different district and began to build afresh. For the wife, work alongside her husband was better therapy than we could provide in hospital, and she was sent out under the care of the probation officer. Invaluable psychological support has been given by this official for more than a year now, and the patient owes her a great debt. Her reports describe how, during the first few months, the patient felt compelled to reconstruct her attack on the child in every detail over and over again; she became depressed and made oblique hints at suicide, which caused much misgiving and almost occasioned her return to hospital several times. Then, as the weeks passed, her smouldering aggression towards the mother became overt, and she made physical attacks on her. She visited relatives and old associates with the express purpose of pouring out all the hostility she had kept hidden over the years, and wrote abusive letters which she always ended with: "You will learn that I am alive and I will force you to pay attention." She is still aggressive, but the acting-out behaviour has stopped and she has been in steady work for some months. The next stage of insight into her aggression and improved interpersonal relationships has not yet been reached.

Case II.

This young woman has five children, the fates of whom have varied in simple relation with the mother's circumstances at the time.

The first was born when she was 17 years old and living as a de-facto wife. The father disappeared when the pregnancy became known, and the child was taken into care without the mother even seeing it.

The second was fathered by her present husband, but before they were married. Whilst under criticism from an elderly landlady, she gave the infant an adult sleeping pill and then became frightened and ran for assistance. The child recovered and was taken into care, and the mother was put on a bond for attempted infanticide.

The third and fourth children were both born in wedlock under reasonable home circumstances. She wanted them and has looked after them well from birth.

The fifth and last could be the product of an affair with a neighbour pursued whilst the husband was away at work. Recently, when under domestic stress, she fractured its skull with a feeding bottle, then wrapped a blanket around its head and went shopping. An observant neighbour, who knew something of the patient's record, saw her going out alone, rescued the baby and took it to hospital. On discharge from hospital, this child will go into care; the mother has been placed on a five-year bond for attempted infanticide.

On admission to this hospital, she appeared indifferent and careless, but this picture soon revealed itself as a façade concealing a good deal of anxiety and emotional conflict. As we observed in Case I, neither psychosis nor systematized neurosis could be found. On the Wechsler Adult Intelligence Scale she obtained an I.Q. of 85; this result puts her in the dull normal class. Projective techniques revealed some self-directed aggression, although it was not a major feature of the tests. Her inadequate, immature personality became apparent during the early interviews, a contributing factor to these defects being the absence of any adequate models for identification in her life. Unstructured interviews resembled those of the first patient, as she spent most of the time recalling the maternal rejection and brutality which had always been her lot. Instead of the cold morality and criticism of the first patient, she had received a more rough-and-tumble physical assault and abuse. She was quite sure that she had been singled out for this treatment, her siblings getting off much more lightly; consequently she had come to believe that she must be different in some way from the others, and for a reason never revealed must have some essential badness in order to deserve such treatment from her own mother. As she grew older she made several attempts to escape the home situation; but whenever she left home she acted like a guilty, bad child and got herself into circumstances which forced her to return in disgrace to the home where maternal wrath awaited her in righteous vigour. When she had two children as an accepted married woman she was a good mother to them; on the two occasions when guilt was associated with the birth, there was also a mother-figure in her house, and each time she rejected the role of motherhood and tried to destroy the child.

When describing her history, she said she was "about" seventh in a family of 14, brought up in a country home disturbed by continual parental quarrels. The father often tried to protect the children from the mother's violence (she once knocked the patient unconscious with a spade), but could not match its determined persistence. Night-time often held more terror than the day, for the mother (knowing the child's fear of the darkness) would lock her in a small unfurnished room as punishment for enuresis. No sex instruction was given to any of the children, and when the first menstrual period occurred the patient sought help from the nearest neighbour.

At the age of 15 years she was sent away to a domestic living-in job, where she set up a de-facto relationship with a married man and became pregnant. After being taken to an abortionist, she was left to deliver a five-months dead fœtus alone and in secrecy during the night; the trauma of such an advent to a girl of 15 years was increased by her ignorance, for she beheld the fœtus with amazed horror. The veil of secrecy was broken by septicæmia and hospitalization; police inquiries and parental indignation helped to keep her ill for some 18 months. Finally she was able to make the journey home, and was promptly turned about and sent to another living-in job. Twelve months of celibacy followed before she again entered into a de-facto relationship—this time with more caution, for the man had met her parents and had proposed marriage. However, the impact of another pregnancy was too much for his intentions and he disappeared; and back home she had to go in as much disgrace as ever. This sordid cycle of events is a feature of her life history; but if she was unable to learn better behaviour patterns, neither was her mother, for she sent the girl straight out to another job, although she was well advanced in pregnancy. However, she could not be got rid of so easily, and returned home to have the baby. She was never allowed to see this infant, and perhaps because of this, or in spite of it, she loved the child and badly wanted to keep it—she still wants to see it even now. But the relentless mother was not to be denied, and although the patient held out for three months, in the end she signed the adoption papers.

After further maternal hostility and rejection over some short-lived jobs, the patient found herself in Sydney, where she formed her third de-facto relationship, but this time the man was her present husband, and he was loyal to her. The first child was born when they were living as a married couple in the house of an old lady; this lady was a semi-invalid and the patient had agreed to look after her and the house. She proved an irascible, fault-finding invalid, who managed to fill our patient with fears resembling those generated by her own mother. One day, after a particularly critical time, and for reasons which she has never understood, the girl put sleeping tablets in the baby's food. The baby appeared to be dead, and the young mother rushed for a doctor. Timely work saved the infant's life then, but it was taken away from her and put into care, while she was put on a five-year bond for attempted infanticide.

After this things were more serene for a while; the patient and her de-facto husband married, had two children and lived quietly. Then, when they were living on a caravan site, the husband started to work long hours to save for a home; the wife felt neglected, complained of being sexually unsatisfied, and commenced a liaison with a neighbouring caravanner. The husband, coming home early one day, caught them in adultery and the scene was set for the reemergence of her old behaviour patterns. Both husband and wife believed her latest pregnancy to be the product of her unfaithfulness, and the patient disliked the child before it was born. When it was only six weeks old she attempted to harm it by pouring her husband's nasal drops into its feeding bottle. Although the baby was unharmed by this, the event set the stage for the patient's final assault, for the husband's mother was brought into the home to keep an eye on her behaviour with the child. Again she had a critical, hostile mother figure appointed to watch and punish her; she began to act like a guilty child again, neglecting the home and the children and continually getting into trouble with her husband. Finally there came the night when both her husband and his mother accused her of taking his wallet. she appeared to become confused and overwrought; she has a hazy memory of events, but knows that she attacked the child with a feeding bottle and then tried to smother it. Leaving it for dead, she went out; but an observant neighbour saved the child, and it has now been taken into care (the third one to be taken from this mother). The patient has been placed on another five-year bond.

Discussion.

Consideration of the psychopathology of this type of case is of more than academic interest. On how well it is understood depend practical questions such as the psychological management, the question of more children, contraception, sterilization, home supervision and the attitudes of the husband and relatives.

Although these two women differ widely constitutionally, they share, to an outstanding degree, an intensely disturbing mother-daughter relationship. In one case there is the hostile, unforgiving mother who lacks the humanizing emotions of compassion, tenderness and love, and in the other the religious, over-controlled, non-sensual woman who controls her daughter as if she is an extension of her own body. Here we see exemplified a type of pathological relationship emphasized in studies of the psychopathology of women. Helen Deutsch (1944) writes:

> Women who have not received maternal love in their childhood develop less motherliness than others. Their own rejection of the mother inhibits their maternal feelings. The well integrated mother expands her ego through her child, the maladjusted feel restricted and impoverished through him. Unbearable pressure of reality in the conflict between self preservation and motherhood may lead to complete rejection.

The greatest model for the developing girl is her mother; when the girl becomes pregnant herself she is forced into identification with the mother, especially after the birth, when she actually holds the child in her arms. Unconscious rejection of the mother leads to rejection of her own self in the role of a mother. In both of the cases under consideration there was evidence that the patients identified themselves, not only with their own mother, but also with the infant; because of these identifications the object of aggression, whether the infant or the self, could be indistinguishable at unconscious levels.

But one may go farther than this. There was more than rejection of the child here. An acute psychotic episode occurred when the mother acted dramatically in accordance with her phantasy world, and lost touch with reality. There was an escape from the "abstract, logical and interpersonal into the paleological, concrete and autistic" (Arieti, 1960). How did this come about? As its background there was the rigid, aggressive mother who could neither give nor accept any form of love, and the absence of anyone in the family, such as a strong and insightful father, who could intervene in the relationship between mother and child; this is a situation which exemplifies the broad outlines of the characters of families which have been described as schizophrenogenic (Jackson, 1958; Szurek, 1956; Bell, 1960). From this situation, the actual development of psychopathology has been brilliantly hypothesized by Arieti (1955). The child tries desperately to preserve a good image of the mother despite his sufferings; he needs this good image because the mother is his representative of the outside world, and unprovoked hostility from her implies that the world is also hostile and threatening. So he removes the bad parts from consciousness and gets two images—the good conscious one and the bad unconscious one. Mother is right in being harsh and strict; she is good, but he is bad; he must be bad, for surely he cannot be so worthless that he is punished without even being bad. And so the bad image of self and the deeper hostility toward the parent develop side by side, and with them a tendency to the development of defences which take a schizophrenic trend, regression to overt psychosis occurring under stress.

Both of our patients were shown to have developed self-images akin to Arieti's "bad-me", and that they harboured deep hostility to the mother became evidence under psychotherapy. Each made the assault on her child at the height of criticism from a parental figure; in Case I it was during religious threats and dissension from the mother, and in Case II after hours of harrying by the husband and his mother over a lost article. May it not be that a potentially schizophrenic background was brought to an acute psychotic break by the intensification of life-long maternal hostility operating on a mother-child relationship made dangerously ambivalent by maternal identification?

Consideration of these cases gives strength to the belief that disturbed mother-daughter relationships may be the direct underlying cause when infanticide occurs. In the same light, other puerperal problems involving the loss of the fœtus — repeated abortion and infertility without physical cause—may be seen to have the same psychopathology, differing only in the stage of reaction and the degree of conscious participation. The theory may be extended further to suggest that hyperemesis gravidarum is an unconscious attempt to eject the fœtus; that food cravings (often taking the form of symbols of fertility—for example, fruit) and fears of a dead or deformed child are reactions against the unconscious wishes to destroy the fœtus. Finally, the consequences are such that premarital advice should have exploration of the mother-daughter relationship as its prime objective.

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Reviews.

The Practice of Medicine. Edited by Sir John Richardson, M.V.O., M.A., M.D. (Cantab.), F.R.C.P.; second edition, 1960. London: J. & A. Churchill Ltd. 9¼" × 6", pp. 984, with 87 illustrations. Price: 37s. 6d. (English).

THE 1960 edition of this textbook of medicine does not differ radically from the 1956 edition. Certain chapters have been revised, brought up to date and made more succinct, but the book is in essence the same.

Although this is on the whole a sound textbook of medicine for undergraduates and general practitioners, the standard is rather uneven. The approach to each subject has not been standardized as in some contemporary textbooks of medicine. This may, or may not, be a good thing. We think, however, that the physiological and anatomical approach as exemplified in the excellent chapter on "Disease of the Respiratory System" could have been applied with effect to some of the other subjects discussed. More emphasis on mechanisms might have heightened the cultural interest and educational value of some chapters. The chapter on "Nutrition" is well done, but in the chapters "The Alimentary Tract" and "Renal Disorders" treatment of the subjects is still somewhat slight.

Admittedly it is difficult to cover all aspects of a subject and still keep a textbook of medicine within reasonable bounds of size. However, a little more thought to content and style might have achieved more balance in the contributed subject matter, whilst improving the clarity of expression in some chapters. The chapter on "Psychiatry", although abridged from the previous edition, is still well done. The other chapters are on the whole adequate. Throughout there is a tendency to neglect prophylaxis in the sections on therapy. The final chapter "The Management of Terminal Disease" deserves commendation.

Health and Hormones. By A. Stuart Mason; 1960. Mitcham, Victoria: Penguin Books Ltd. 7¼" × 4¼", pp. 200, with illustrations. Price: 6s.

THE new Pelican book, "Health and Hormones", by Dr. A. Stuart Mason, is an excellent and readable account of the present state of endocrinology, which can be commended to both medical students (graduate and undergraduate) and the lay public, for whom it is primarily intended.

The author has a considerable gift for anecdote which enlivens the text in many places. For example, he recalls the way in which so many advances in our knowledge have been dependent on the exigencies of war. This is true of our knowledge of the adrenal cortex, and even true of the discovery of iodine as a by-product of the preparation of gunpowder in Napoleon's attempted invasion of England, and of that of radioactive iodine as a by-product of atomic fission during World War II.

The author does nothing to play down the colourful aspects of endocrinology; but his text is interspersed with much sensible advice on general matters, such as obesity, the marriage bed, and many other subjects related to endocrinology. He reminds us that we are not victims of our endocrine system.

The story of endocrinology certainly spreads wide, and the author has performed his task very well. This book will be of particular value to undergraduate medical students.

Blood Flow in Arteries. By D. A. McDonald, M.A., D.M. (Oxon.), D.Sc. (Lond.); Monographs of the Physiological Society, Number 7; 1960. London: Edward Arnold (Publishers) Ltd. 8¼" × 5½", pp. 338, with illustrations. Price: 40s. net (English).

THE field of hæmodynamics has always been of interest to circulation physiologists, and is now becoming of increasing interest to the clinical worker using the modern techniques of cardiological investigation. The clinician has been somewhat overawed by hæmodynamics, since the literature in this field has never been readily available to him. The present monograph goes a long way towards remedying this situation, and covers a large number of important topics in a relatively small volume. The book illustrates the major physical concepts very clearly in qualitative terms and by means of well-produced diagrams. The medical reader interested in the circulation will thus benefit greatly by reading this book, even though the mathematical sections of it may be beyond him.

The most important sections of the book deal with the pressure/flow relationships found in the arterial system during pulsatile flow. These sections are largely based on the work of the author's own group and are particularly well presented. Topics related to the foregoing include a discussion of the physical properties of the arterial wall, pulsatile flow patterns in different arteries, and the problem of wave reflection. There is also a chapter on the design of manometers and the shape of the pressure pulse in different parts of the circulation.

There are many sections in the book where one is forced to conclude that some of the lack of agreement between fact and theory is the result of the very small number of experiments used as a basis for theoretical analysis, and this will no doubt be remedied in the future. The book is useful in highlighting our areas of firm knowledge in this field as well as our areas of ignorance. For this reason it should be read by everyone seriously interested in circulatory physiology.

Source Book of Medical History. Compiled with notes by Logan Clendening; 1960. New York: Dover Publications. 8" × 5", pp. 700. Price: $2.75.

THE firm of Dover Publications in New York has reprinted an anthology of classical medical writings carefully selected by the late Dr. Logan Clendening, a distinguished teacher, physician and medical historian of the University of Kansas in the United States of America. When this collection was first published in 1942, he had gained an international reputation as an acknowledged authority on medical history, and for the fascinating way in which he was accustomed to present this subject to his own profession and to the reading public at large.

This valuable source book of 675 pages contains significant excerpts from the original texts of over one hundred different authors, beginning with the ancient Egyptian papyri, coming down through the ages to the paper submitted by Wilhelm Conrad Röntgen in 1895 announcing his discovery of the X rays. The collection is designed to illustrate the evolution of medical thought and practice over the last 4000 years. The main sections are preceded by short biographical notes on many of the writers and a list of references consulted by the compiler. An interesting feature is the inclusion of a number of extracts from classical literature in which non-medical authors over widely separated periods of time have provided us with sidelights on the vagaries of medical practice and the idiosyncrasies of doctors. Such references begin with the Greek playwright, Aristophanes, with his humorous description of "incubation" in the temples of Asklepios, down to the clever medical characterizations to be found in the works of Chaucer, Molière, Dickens and Thackeray.

This comprehensive anthology in English translation should be available to research workers and medical historians in every medical library.

Histonomy of the Cerebral Cortex. By S. T. Bok; 1959. Amsterdam, London, New York and Princeton: Elsevier Publishing Company. London: D. van Nostrand Company Ltd. 8¾" × 5½", pp. 446, with 176 illustrations. Price: 72s.

ASTROLOGY is a theoretical system based upon a purely descriptive account of heavenly bodies; astronomy is, it is hoped, a much more satisfactory theoretical system based upon a quantitative examination of heavenly bodies. On this analogy Professor Bok, who is Director of the Central Institute for Brain Research in Amsterdam, has employed the term "histonomy" instead of "histology" for his present attempt to apply quantitative methods to an analysis of the cerebral cortex—perhaps he should have carried the analogy to its logical conclusion and called the book "cerebral neuronomy".

Mathematics has, of course, been extensively employed in cortical analysis previously; but this is probably the first complete systematic compilation on the subject. Professor Bok deals with each aspect in turn. He begins with a consideration of neurons and other tissue elements and examines the distortions imposed by cortical curving, rightly pointing out that many minor cortical variations are due purely to such distortion—here he has been anticipated to some extent by von Exonomo. Then he proceeds to detailed measurements of the neuron—nucleus, perikaryon, dendrites, etc.—extracting various relationships with cell size and volume, cortical volume and area and body size and weight. In the last he finds similarities to the findings of Dubois on "cephalization". The treatment is mainly mathematical, and it is open to mathematicians to check his findings and conclusions; but no exception can be taken to the author's objective or plan of attack so far.

However, the concluding part of this work is likely to excite the most interest as well as the most controversy. Professor Bok found from his measurements of the dendritic

field that there are globular spaces in the meshwork of fibres, and he states that in fresh material he could confirm the existence of fluid-filled vesicles, many containing a mitochondrium, occupying such spaces. He concludes that these vesicles are functional parts of the brain, and suggests that they may be the seat of "memory". (On the other hand, some microscopists deny the existence of any tissue fluid or spaces in the brain at all, although that seems unlikely.) Clearly, the type of memory Professor Bok envisages here must be a sort of "biological" memory, not the familiar one of ordinary conscious memory. He agrees that this is highly speculative and it is certain to arouse considerable criticism. However, it is the function of a book to stimulate, even provoke, and this does so. And even if the author is proved wrong, he has nevertheless opened up a new and possibly fruitful line of thought. Approached from that angle, the work is refreshing and enjoyable and can be recommended to those whose interests lie in the cerebral cortex. Certainly, every medical library should possess a copy.

Antisera, Toxoids, Vaccines and Tuberculins in Prophylaxis and Treatment. By H. J. Parish, M.D., F.R.C.P.E., D.P.H. and D. A. Cannon, O.B.E., M.B., B.Sc., D.T.M. & H.; fifth edition, 1961. Edinburgh and London: E. & S. Livingstone Ltd. 8¼" x 5½", pp. 296, with illustrations. Price: 37s. 6d. net (English).

THIS book was first published in 1948, and the fifth edition has just come off the press. New chapters have been added, and revisions are noticeable in most of the others. In restricting the subject matter to practical questions, the authors have produced a down-to-earth reference work for practitioners who seek advice in the application of vaccines, toxoids and sera.

Antisera and antivenoms are discussed in 48 pages, while active immunization against bacterial diseases takes 72. Seventy pages are devoted to preparations for immunization against viral and rickettsial diseases. The standard smallpox, yellow fever, rabies and poliomyelitis vaccines are described, and a discussion follows of preparations used for active immunization against influenza, common cold, mumps, measles, encephalitis, louping ill and rickettsial diseases. Two short chapters contain immunization schedules in childhood and for international travel. Finally, a few pages are devoted to the problem of personal records of immunizations and peculiarities such as allergy to penicillin or horse-serum. A chronological list containing some of the important dates in the history of microbiology and portraits of 16 outstanding bacteriologists conclude the text. A short list of textbooks, memoranda and summaries is appended as a supplement to the references quoted in the text.

Clinical Child Psychiatry. By Kenneth Soddy, M.D., D.P.M.; 1960. London: Baillière, Tindall and Cox. 9¼" x 6", pp. 480. Price: 42s. (English).

THIS textbook of child psychiatry follows a different pattern from older textbooks. This may make it less popular than it deserves to be with medically orientated readers. The author explains that he believes child psychiatry needs at the present stage of its development a lot of "accurate painstaking detailed description of the phenomena of illness". As a consequence to this approach, the text contains the details of many case histories (95 in all). This alone makes the book very useful to the student or beginner in child psychiatry.

The author commences his book with a discussion of the relative importance of hereditary and environmental factors in the production of nervous and mental disorders. The conclusion he reaches is that there is a tendency for children to inherit a mixture of parental qualities. The life in common of the family tends to reduce differences between parents and children and to increase similarities. Hence children tend to be like their parents.

Sociological topics are of interest to the child psychiatrist, and the author includes a good chapter on the family and another useful one on growing up in a family. There is a discussion on family cultural patterns, the "break-up" of the family, class structure, the welfare State and so on. The chapter on growing up in a family deals with parents' attitudes, broken homes, factors impairing parent-child relationships, etc. The author displays considerable knowledge of these things, no doubt from his own clinical experience.

The general lay-out of the clinical psychiatry in this book is unusual, in that clinical phenomena are discussed under the headings of the various age groups. For instance, there are discussions of the clinical phenomena occurring in the nursery age, in the school age and so on. Difficulty occurs with this arrangement when a clinical phenomenon is common to more than one age group. Some readers will think that the arrangement of clinical disorders in this book is not as neat as in orthodox textbooks, and in its capacity as a reference book things may be a little harder to find. However, this textbook on child psychiatry is full of clinical description of disease and will be a useful volume for the students' and practitioners' libraries.

Children for the Childless: A Concise Explanation of the Medical, Scientific and Legal Facts about Conception, Fertility, Sterility, Heredity and Adoption. Edited by Morris Fishbein, M.D.; 1960. London, Melbourne and Sydney: William Heinemann Ltd. 8½" x 5½", pp. 224. Price: 15s. 6d.

THIS book has an attractive alliterative title, and its aim is to present a concise explanation of the medical, scientific and legal facts about fertility, sterility, heredity and adoption. It is a symposium written by many authors, who are all American, and under the editorship of Morris Fishbein. For the second time this year we have for review a book that was published in America some years ago and has now been "modified to meet the needs of the English reader" and uses English spelling. This revision has been done by Stallworthy of Oxford.

The book is presented in eight chapters, with a bibliography for the lay reader, and occupies about 200 pages. The first chapter is entitled "On Being a Parent Today", and deals with the changing status of parents and children in recent times. It is interesting but general, and reminiscent of a talk on marriage guidance. The book progresses to an account of the structure and function of males and females, premarital examinations and insemination, all written for the intelligent layman. A chapter follows on psychosomatic aspects of fertility and sterility, written with the usual persuasive phraseology of a psychiatrist. We cannot find any information in this chapter to alter our view that sterility causes tension often, but tension causes sterility rarely. There is then an account of the causes and investigation of sterility by Rubin, and this is again intended for the layman, being of the nature of the integration lecture given to sterility patients when they first attend a clinic. The technique, indications and legal complications of artificial insemination are well handled by Greenhill of Chicago, and this section is followed sequentially by sections on adoption and elementary genetics.

This is essentially a book on a medical subject written for the public, and it contains no factual data for the specialist in gynæcology and this particular sub-specialty called infertility. There is a feeling that one has read all this before in other books, and this one is as good as some of its predecessors and better than many. If an infertility patient had not read a similar publication previously, this one would be instructive and helpful. The publication is well produced and bound, and contains a few black and white illustrations. One may summarize by stating that this book has fulfilled its purpose, which is to enlighten a non-medical public on the medical aspects of fertility and sterility.

Medical, Surgical, and Gynecological Complications of Pregnancy. By The Staff of the Mount Sinai Hospital and edited by Alan F. Guttmacher, M.D., and Joseph J. Rovinsky, M.D.; 1960. Baltimore: The Williams & Wilkins Company. 10" x 6½", pp. 632 with many illustrations. Price: £9 1s. 6d.

THE interplay between obstetrics and other fields of medicine is extensive. Obstetricians find it increasingly necessary to follow developments in the field of internal medicine, and the advice of "obstetrically minded" physicians is often invaluable in dealing with pregnancy complicated by cardio-vascular, renal, pulmonary or hepatic emergencies. A significant contribution to this borderline area of medical science has been made with the publication of the first edition of the present book.

This volume represents the combined views of those members of the staff of the Mt. Sinai Hospital, New York, who are either on the active obstetrical staff or who have been coopted from their respective specialities to conduct particular clinics in association with the obstetrical service of that hospital, and it is evident that the various contributors write from first-hand knowledge of their subject.

The special clinics which were set up within the obstetrical department of Mt. Sinai Hospital included cardiac, pulmonary, hypertensive-renal, diabetic, hæmatological, neurological, psychosomatic and endocrine clinics. However, the subject matter of this book ranges beyond the scope of the

special clinics, and includes well-written sections on the general, surgical, orthopædic, gynæcological and urological complications of pregnancy, on collagen disorders, on malignancy during pregnancy, and on genetic considerations.

Because of its considerable scope and variety, the actual context of this book does not readily lend itself to review. However, it is clear that, under the able editorship of A. F. Guttmacher and J. J. Rovinsky, the various sections are well balanced, and sample extracts from almost any section make good reading. Especial mention might be made of the several chapters on endocrine disorders, and of the chapter on disorders of the liver during pregnancy.

It would be surprising if this carefully-documented pooling of ideas, knowledge and experience of men working in different fields, but having a common interest in the reproductive process, did not result in a worthwhile publication, and readers will not be disappointed.

Clinical Bacteriology. By E. Joan Stokes, M.B., F.R.C.P.; second edition, 1960. London: Edward Arnold (Publishers) Ltd. 8¼" × 5¼", pp. 320, with illustrations. Price: 30s. (English).

THE first edition of this book appeared five years ago, and the forecast of reviewers that it would become a recognized guide to the practice of clinical bacteriology is fulfilled by the early appearance of a second edition. The author is the Clinical Bacteriologist at University College Hospital, London, and writes with the authority and discrimination of wide experience. In a foreword, A. A. Miles states that many of the methods described had their beginning in 1940-1944, in the work of Dr. Stokes and other former colleagues of his in the Emergency Pathological Services of the London Sector 4; much, of course, has been added to keep pace with recent advances. This book is a clear and logical exposition of clinical bacteriology, defined in the foreword as "an art that demands flexibility of mind and technique". The flexibility is needed to reconcile the established principles of the approach with the practical necessities of clinical work, in which speed is always desirable. The academic ideal is always in the background of the author's mind, and she is most careful to define the limits imposed by clinical requirements. Chapter I on "The Practice of Clinical Bacteriology", and Chapter IV on "Specimens from Sites with a Normal Flora", are especially valuable in this regard, and could be read with advantage by clinicians as well as clinical bacteriologists. Too often the clinician has only a hazy idea of what is involved in the tests he requests. This is well illustrated by the examination of specimens from sites with a normal flora. The examination of sputum, for example, is complicated by the fact that, with the exception of tubercle bacilli, all the important lung pathogens can be recovered from the upper respiratory passages of apparently healthy people, as well, of course, as the many non-pathogens. It is clear that antibiotic sensitivity tests on bacteria grown from sputum or from nose and throat swabbings are of doubtful value except in acute infections. Chapters IX and X, on "Hospital Epidemiology" and "Dysentery and Food Poisoning", are of great practical value and full of common sense. The short section on fungous diseases is inadequate, but this subject is outside the scope of the book. This valuable manual should be in every hospital library.

Diagnostic Radioisotopes. By Charles A. Owen, Jr., M.D., Ph.D. (Med.), 1959. Oxford: Blackwell Scientific Publications Ltd. 9¼" × 6", pp. 445, with 71 figures and 49 tables. Price: £6 6s.

THE author has attempted to collect all tracer methods in a book devoted entirely to the diagnostic application of radioisotopes. In so doing he has made some sections into compendia of references rather than readable and instructive accounts, and the work tends to be too exhaustive and all-inclusive rather than discriminating.

The author points out that few diagnostic procedures using radioisotopes are established in the sense that the sulphobromophthalein test of liver function and the Wassermann test for syphilis have been accepted. Even the evaluation of thyroidal function by means of radio-iodine, the most firmly founded of all radioisotope techniques, is based on a wide variety of procedures. The comparative accuracy and feasibility are evaluated of the absolute uptake of ^{131}I by the thyroid two and twenty-four hours after administration of the isotope, the protein-bound serum ^{131}I, the urinary ^{131}I excretion and the thyroid clearance of plasma ^{131}I. There is a full table of substances that may interfere with radio-iodine tests.

The radio-iodine section is about 100 pages out of a total book length of some 300 pages. Fifty pages are given to counting. There is a short, common-sense account of radiation hazards. Many pages are given to more obscure applications of isotopes, but the 80 on hæmatology include useful sections concerning the use of radio-iodinated human serum albumin, the labelling of erythrocytes with radiochromium, radioactive iron as a tracer and vitamin B_{12} labelled with radiocobalt.

Appendices include physical decay tables, lists of radioactive isotopes and four-place logarithms.

Experiments and Observations on the Gastric Juice and the Physiology of Digestion. By William Beaumont, M.D.; 1960. New York: Dover Publications Inc. 8" × 5¼", pp. 330. Price: $1.50.

AT the beginning of this century, Sir William Osler made a helpful contribution to medical history when he gave full publicity and well-merited praise to the young American surgeon, William Beaumont, M.D., for his unremitting and successful efforts to save the life of a Canadian *voyageur*, Alexis St. Martin, who had accidentally received a severe gunshot wound in the left side of his chest, later resulting in a permanent gastric fistula. Owing to the perseverance of Beaumont over a period of 12 years from the accident in 1823, he carried out a series of observations and experiments on his patient with such determination and technical skill that the medical world, for the first time, obtained valuable information on the physiology of digestion.

The Dover Publications of New York has performed a useful service by printing in one volume the full text of Sir William Osler's address to the Saint Louis Medical Society in 1902, followed by the unabridged and unaltered substance of Beaumont's book published in Plattsburg in 1833, representing one of the first applications of a scientific mind to the new study to be known as experimental medicine.

At the conclusion of his address Osler said:

> Beaumont is the pioneer physiologist of this country, the first to make an important and enduring contribution to this science. His work remains a model of patient persevering investigation, experiment and research, and the highest praise we can give him is to say that he lived up to and fulfilled the ideals with which he set out and which he expressed when he said: "Truth, like beauty, when unadorned is adorned the most, and in prosecuting these experiments and enquiries, I believe I have been guided by its light."

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Physiological Responses to Hot Environments: An Account of Work Done in Singapore, 1948-1953, at the Royal Naval Tropical Research Unit with an Appendix on Preliminary Work Done at the National Hospital for Nervous Diseases, London", compiled by R. K. Macpherson; 1960. London: Her Majesty's Stationery Office. 9¼" × 6", pp. 340, with figures. Price: 35s. net (English).

"The Surgery of Mitral Stenosis", by Robert P. Glover, M.D., M.S. (Surg.), F.A.C.S., F.A.C.C., and Julio C. Davila, M.D., F.A.C.S., F.A.C.C.; 1961. New York, London: Grune & Stratton, Inc. 9" × 6", pp. 232, with illustrations Price: $9.50.

"Pneumoconiosis: Modern Trends", Report of Meetings held in Birmingham (April, 1959) and in Glasgow (January, 1960); 1961. London: The Chest and Heart Association. 8¼" × 5¼", pp. 144, with illustrations. Price: 18s. 6d.

"The Australian Universities—1970". Papers presented at the Symposium on "The Australian Universities—1970", held at the University of New South Wales on December 6, 7, 1960. Published by The University of New South Wales, Sydney. 9¼" × 7", pp. 80. Price: 17s. 6d.

"Annual Review of Physiology, Volume 23", edited by V. E. Hall; 1961. Palo Alto, California: Annual Reviews, Inc. 8¼" × 6", pp. 682. Price: $7.50.

"Rorschach's Test: Basic Processes, Volume 1"; third edition, fully revised, by S. J. Beck, Anne G. Beck, E. E. Levitt and H. B. Molish; 1961. New York, London: Grune & Stratton. 9" × 6", pp. 246, with figures. Price: $6.00.

"Clinical Obstetrics and Gynecology, Volume 4, Number 1": "Obstetric Anesthesia and Analgesia", edited by R. A. Hingson, M.D., "Vaginal Surgery", edited by A. F. Lash, M.D., Ph.D.; 1961. New York: Paul B. Hoeber, Inc 9¼" × 6", pp 304 with illustrations. Price: $18.00 per year by subscription.

The Medical Journal of Australia

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THE CHALLENGE OF PAPUA AND NEW GUINEA.

MOST of us in Australia know far too little about the Territory of Papua and New Guinea. Yet what happens there in the next decade or so may well make or mar Australia's international reputation; and, what is fundamentally more important, it will determine the ease or otherwise of our national conscience. The Territory is our responsibility, voluntarily accepted. Papua, in the south-east, has been Australian territory since we took it over from Great Britain in 1906, and New Guinea, in the north-east, has been in our care since 1921, first as a mandate and then since shortly after the Second World War, as United Nations trust territory. The *Papua and New Guinea Act*, 1949, approved the placing of New Guinea under the International Trusteeship System and provided for its government in an administrative union with the Territory of Papua. In this way the Territory of Papua and New Guinea came into being. It now includes under one administration all of the large island of New Guinea east of the Dutch territory, and the islands of New Britain, New Ireland, Bougainville and the Admiralty group. Its total population is slightly less than two million, the vast majority of the inhabitants being indigenous Papuans and New Guineans; smaller groups, according to 1958 figures, are made up of 18,600 Europeans, most of whom are Australians, 2800 Asians and 2200 people of mixed race. The Territory is 183,600 square miles in area, and contains some of the most difficult mountain, jungle and swamp country to be found anywhere.

Of Australia's activity in Papua and New Guinea before the 1939-1945 war, there is little to say. We are not burdened with any shameful legacy of cruelty and gross exploitation, such as marks the records of many colonial powers of the Old World, but neither have we as a nation anything to boast about. Most of the worthwhile activity must stand to the credit of individuals like Sir Hubert Murray, and this, measured by the size of the task, was very limited. Since 1945 the pressure of international opinion has accelerated our activity, and it may fairly be said that we have now accepted the responsibility with a good grace. The Australian Government has pledged itself to the policy of ultimate self-determination for the people of the Territory, and the Administration's activity is directed to that end. Those responsible for the tasks of administration and development, whether in Canberra, in Port Moresby or at stations throughout the Territory, are tackling the job with sincerity, good will and good effect, and many are wholly dedicated to their task. In partnership with the official work is the extensive activity of the missions, which the Administration recognizes and values. Given fair time this partnership will do what is required to develop the country and bring the indigenous people forward to the point where self-determination will be right and realistic. Whether the continued pressure of international opinion will grant the necessary time is another matter. The voices of the naïve, the ignorant, the fanatical and the deliberately mischievous are all to be heard in the councils of the nations, and the danger is that they may force the situation beyond what is wise. Many who are in a position to know are confident that the people of the Territory will in due time run their own affairs and run them very well. But it would be no kindness to thrust full responsibility too soon on these people, many of whom are as yet unable to speak for themselves and who dwell in a land where at any point, as Jon Cleary has put it, the Stone Age is "not ten thousand years but perhaps only a mountain range away".

What, it may be asked, has this to do with a medical journal? One answer is that a liberal profession such as ours, having a humanistic bias and enjoying some influence in the community, should be alive to the whole situation, which fortunately on the national level seems to be receiving consideration largely free from party political bias. The second and more specific answer is that health matters are of major importance in the development of the Territory. They rank alongside such vital issues as education, with its many facets, social and political development, and, what is in some ways the knottiest problem, the establishment of economic self-sufficiency. All these issues pose major problems which must in large measure be solved before the Territory can stand on its own feet. The health situation is fundamental. Dr. John Gunther, the present Assistant Administrator of the Territory, and a former Director of Public Health, has spoken of the "curtain of disease" which hangs over the people of the Territory, holding them back physically and mentally and hindering them from giving of their best, which is potentially a very fine best. Chief among the diseases are malaria, parasitic infestation, particularly with hookworm, and tuberculosis. Of major importance also, especially in the inland areas, is the nutritional problem associated with shortage of protein. Much has been done in the attack on these problems, and much more is planned to be done, but the task is enormous and more complex than many armchair critics realize. Advances in health are interdependent with progress in education and social advancement. If one lags, all lag. But as the hobbles of ignorance, superstition and disease are unloosed, we may expect to see progress accelerating, and these fine people set free to take a worthy place in the modern world.

The medical profession in Australia will do well to turn its eyes northwards with a sympathetic interest, feeling that it has a particular stake in the difficult yet fascinating problems of the Territory. As a responsible section of the community it can play its part in fostering a wider interest by Australians in our trust territory and in encouraging the Federal Government, first, not to stint its expenditure in the Territory, which is much more important than a lot of things on which we are only too willing to spend money, and second, to resist diplomatically but firmly misguided international pressure towards pre-

mature self-determination. In our professional role we should be encouraging the best of our young colleagues to take up the challenge of the Territory—and in passing it should be noted that medical women have made and are making a distinguished contribution to the task, notably in the field of maternal and infant welfare. We shall have more to say on another occasion about the medical work, as it ranges through curative and preventive medicine, health education and research. But it is perhaps opportune to point out the increasing importance that must be assigned to a previously rather neglected field, the training of the Territory's own men and women as medical practitioners and nurses. The heavy weight of responsibility for the health of their own people will one day fall on their shoulders, and we should be prepared to do everything in our power to help them to be ready for it.

Current Comment.

PROLONGED STEROID THERAPY IN CHILDHOOD ASTHMA.

WHEN the corticosteroids were first introduced for the treatment of rheumatoid arthritis, asthma and other diseases in the same category, the dramatic response in numerous cases raised great hopes in the hearts of both patients and doctors, and for a time it seemed to many difficult to justify the withholding of these drugs from any patients who might seem to benefit from them. The tremendous cost and short supply of these drugs in the first instance necessitated many difficult decisions. Now that the problems of synthesizing these complex molecules have been overcome, corticosteroid drugs are at least freely available, in considerable variety, though still very expensive. However, as is so often the case with new treatments, experience has taught that the use of these drugs is beset by many pitfalls. Medical journals of the past few years contain frequent warnings against the indiscriminate use of steroid preparations, valuable though they are in appropriate cases. An interesting commentary on the changing status of these drugs is provided by J. P. Anderson[1] in a paper on prolonged steroid therapy in childhood asthma. In this he describes how, at the Leicester (England) Chest Unit, after the first successful use of prednisolone in the autumn of 1955, all severely affected patients and many moderately affected were given the new drug. The patients considered by Anderson in his present paper comprise 39 children, all but one of whom had been attending the out-patient clinic for an average period of three years, without obtaining marked benefit, before treatment with prednisolone was instituted. This was given orally, the dosage depending on age and response to treatment; in general, this worked out at about 1 mg. per year of age per day, given in divided doses; no child received more than 20 mg. per day at any time. Most of the children were between 5 and 10 years of age when treatment with prednisolone was begun. The period under discussion consisted of two main phases—the first prior to the end of September, 1957, during which prednisolone had been given continuously for at least 12 months; and a subsequent period, up to the end of February, 1959, during which determined attempts were made to discontinue the drug.

An important point about this series was that prednisolone therapy had been accepted as the correct treatment of severe asthma recalcitrant to other measures, and it was therefore in no sense a clinical trial. There was no control series, and no detailed analysis of the cases was begun until prednisolone therapy had been in progress for some months. Nevertheless, the initial results were clearly in agreement with reports by other workers. Several children were dramatically relieved of their symptoms, and continued to enjoy complete freedom from bronchospasm for the first time that they could remember. All the children in this series had previously had a degree of disability enough to dislocate normal home and school life during the previous year, and after beginning prednisolone therapy eight out of ten were enabled to lead normal lives. There was, however, another side to the picture. After eight months of treatment an eight-year-old boy died in peripheral circulatory collapse after an illness which lasted 20 hours. Post-mortem examination revealed an unsuspected bronchopneumonia, and in retrospect Anderson concludes that death was probably due to acute adrenal failure precipitated by septicæmia originating in the unsuspected area of pneumonia. A few months later another of the group, an eleven-year-old girl, was admitted to hospital in semi-coma with peripheral circulatory collapse due to adrenal failure after two-days' illness. She was saved by prompt resuscitation and made a spontaneous recovery, but after this narrow escape from a second disaster, the policy was reversed and the attempt begun to wean the survivors from their prednisolone.

In spite of every effort to cushion the effect of withdrawal of the drug by substituting alternative forms of therapy, the attempt in many cases imposed an intolerable burden on the patient, and after 17 months the position was reached where eight children had had no steroids for 12 months, and were regarded as having been weaned from the drug; 11 children had been without steroids for shorter periods, and were considered to be on probation; and 19 children were still receiving steroids either almost continuously (15 children) or for at least a part of every month (4 children). In this last group 13 were receiving triamcinolone, 5 prednisolone and 1 dexamethasone. Anderson concludes that the initial severity of the child's asthma seemed to be the critical factor in the determination of whether withdrawal of steroids was to prove possible; if severe, withdrawal was unlikely to be readily achieved; if moderately severe, about half the patients could be weaned with varying degrees of difficulty.

This story leads naturally to a consideration of the place of steroids in the long-term treatment of childhood asthma. Anderson points out that, to judge from the published warnings, even more trouble might have been anticipated in the series under consideration, including as it does more than 800 "prednisolone-months" of treatment. He states that, to be therapeutically effective, steroid drugs must produce some adrenocortical suppression, and serious complications are not prevented by low dosage. In the two disasters quoted, the children were taking in one case 5 mg. of prednisolone daily, in the other 10 mg. On the other hand he considers that in severely disabled asthmatic children who have failed to respond to full routine treatment, the benefits of prolonged steroid therapy may well outweigh the dangers. He thinks it probable that those for whom steroid therapy is indicated make up less than 5% of those with asthma bad enough to need specialist advice. He considers that the most difficult decisions arise in the cases of children with moderately severe asthma who fail to show adequate improvement under full routine treatment—and observes that more children fall into this category than most workers allow, probably at least 10% of children attending asthma clinics. Steroid therapy can transform the lives of these patients, and reveal to them and their parents just how subnormal an existence they have been leading. Anderson suggests that in such cases the alternative is often residential open-air schooling, which, if available, may be the wiser course.

Once the decision is implemented to embark on prolonged steroid therapy (as opposed to the short-term use of steroids in status asthmaticus, and in cases of severe recurrent asthma with long intervening free periods) it is difficult to go back, and Anderson makes it clear that to wean an asthmatic patient, established on steroid therapy, from these drugs is often physically and mentally distressing. He indicates that when a decision is taken to embark on such therapy, it should be with the realiza-

[1] *Amer. J. Dis. Child.*, 1960, 100: 341 (September).

tion that it may be necessary to continue the treatment for many years, if not permanently. Nevertheless, he concludes that, with due care, good results can be confidently anticipated for prolonged steroid therapy in a majority of severely asthmatic children—certainly in a larger proportion of cases than in adult asthmatics; and he adds that, in any individual case, there is always the hope that the patient will be tided over a particularly vulnerable age period with sufficient health to face the future more confidently, and may eventually become free of disabling bronchospasm and independent of steroids.

Finally Anderson lists the safeguards which he considers should be observed when prolonged steroid therapy is undertaken. These are: expert selection and supervision, with routine chest radiography, tuberculin testing, urine analysis, spirometry, and height and weight measurements; the dosage to be kept as low as possible, with continuation of full adjuvant treatment; dose reductions below growth-suppressing levels often enough to allow the regaining of any lost height; the exhibition of broad-spectrum antibiotics promptly with respiratory infections; an awareness of the potential dangers of sepsis or abdominal upsets; the carrying by the child of a "steroid card" and some spare tablets; adequate instruction to parents about dose adjustment to current needs and about the warning signs of the commoner complications. Anderson's paper contains much other detail, and is altogether a very instructive discussion of the difficulties associated with the treatment of childhood asthma by steroids in the light of first-hand clinical experience.

A CENTURY AT ST. PETER'S HOSPITAL FOR STONE.

UNDER the capable editorship of Dr. Clifford Morson, a member of the surgical staff for many years, a few enthusiastic supporters of St. Peter's Hospital for Stone in Henrietta Street, London, have ably contributed to the production of a handsome little volume[1] to commemorate the completion of a century of useful and distinguished service to the public since their hospital was founded in 1860. Originally, it received its curious designation from those days when, for some reason or other, there was a mounting prevalence of that distressing complaint—stone in the bladder.

Owing to the inventive genius of the Parisian surgeon, Jean Civiale, Henry Jacob Bigelow of Boston and Sir Henry Thompson of London, the older methods of removing the stone by lithotomy were superseded by the safer operation of crushing the stone *in situ* by means of a special instrument known as the lithotrite, and then evacuating the small fragments by irrigation to complete the new operation of litholapaxy. In the early years the hospital appointments to the staff were reserved for those general surgeons who were willing to investigate scientifically the pressing problem of bladder stone and to employ the latest surgical techniques in their treatment. The invention of such essential aids to physical diagnosis as the ophthalmoscope, the laryngoscope and the electrically-lighted cystoscope, together with the necessity for additional knowledge, skill and training in their proper use and for the performance of difficult operative procedures, later created the need for the establishment of special hospitals and clinics throughout the world.

This interesting record opens with a well-constructed sketch of the history of the hospital written by Dr. Cuthbert Dukes, who recalls many significant episodes in the development of genito-urinary medicine and surgery, and comments entertainingly on the persistent rise of special hospitals in Great Britain in spite of organized opposition from the medical profession as a whole. There is the story of an unexpected windfall when the hospital finances were at a low ebb, which soon helped to give it a new lease of life. One day in February, 1873, a man called at the hospital and asked to see the secretary, who was handed a sealed parcel for which a receipt was given on request. The stranger stipulated that the parcel must not be opened until he had left the building, and then it was found to contain ten Bank of England notes of one thousand pounds each. The sequel to this generous action came 45 years later, when an elderly man was admitted for a prostatectomy operation and he confided to the then secretary that he was the one who had delivered the parcel and gave the name of the actual donor. The board of directors respected the wish of the hospital benefactor to remain anonymous by omitting this information from the minutes, and his true identity will remain for ever lost in oblivion.

After nearly half a century of rather restricted practice, the scope and importance of the hospital services were considerably extended with the appointment of Dr. Peter Freyer to the surgical staff in 1896, mainly because of his exceptional experience in the treatment of vesical calculus while attached to the Indian Medical Services. Four years later Freyer performed his first suprapubic prostatectomy at the hospital, which "revolutionized the general treatment of prostatic obstruction and also changed the emphasis of the surgical work at St. Peter's". Opposition to St. Peter's as a special hospital soon died down with the opening of the twentieth century, when it had clearly established its usefulness as an active centre of teaching, research and training, where a high standard of excellence might be attained in the application of expert knowledge and skill for the care and treatment of patients suffering from diseases and injuries of the complicated and delicate genito-urinary system.

The remainder of the book contains short biographies of the more important surgeons and physicians who have served the hospital since Sir Spencer Wells became the first surgeon to be appointed to the staff in 1860. It ends with a tribute to the notable work performed by the nursing profession once the Nightingale methods came into fuller operation.

[1] "St. Peter's Hospital for Stone, 1860-1960", edited by Clifford Morson, O.B.E., F.R.C.S.; 1960. Edinburgh and London: E. & S. Livingstone 9¾" × 7", pp. 70, with illustrations. Price: 21s. net (English).

"THE AUSTRALIAN AND NEW ZEALAND JOURNAL OF OBSTETRICS AND GYNÆCOLOGY."

THE Australian and New Zealand Regional Councils of the Royal College of Obstetricians and Gynæcologists and the Arthur Wilson Memorial Foundation have launched out with an official organ, *The Australian and New Zealand Journal of Obstetrics and Gynæcology*. Under the editorship of Dr. E. V. Mackay and with Professor Lance Townsend as chairman of its board of management, the new journal is to appear quarterly. Intended to appeal in its content to specialists and general practitioners alike, it invites contributions of articles relating to obstetrics and gynæcology from all medical practitioners. The first number, dated March, 1961, opens with a paper on "The Syndrome of Pelvic Pain in Women" by Howard C. Taylor, junior, from the Department of Obstetrics and Gynecology, The College of Physicians and Surgeons, Columbia University, New York. This is the text of Dr. Taylor's guest address at the fifth Australian Congress of the College held in Melbourne in October, 1960. The other articles range over a wide field within the specialties concerned. Barry Kneale and Robert Barter write on "Leiomyosarcoma of the Uterus", Rodney P. Shearman on "The Role of the Adrenal Cortex in the Stein-Leventhal Syndrome", Lance Townsend on "Induction of Labour in Rh-Immunized Patients", Vera I. Krieger on "Serological Tests on Rh-Immunized Mothers" and L. Woodrow Cox on "The Diagnosis of the Position of the Fœtal Skull". The journal is attractively produced, printed on art paper with a red cover. We wish it success, both as the organ of the Australian and New Zealand Regional Councils of the College and as an agency for encouraging the highest standards of obstetrics and gynæcology in our two countries. The subscription rate is £2 2s. per year. Intending subscribers should write to the manager of the journal, 8 Latrobe Street, Melbourne, C.1.

Abstracts from Medical Literature.

RADIOLOGY.

Pulmonary Alveolar Proteinosis.

H. P. PLENK *et alii* (*Radiology*, June, 1960) report four cases of pulmonary alveolar proteinosis. The disease was first described in 1958 and is characterized by insidious onset, with fatigue, loss of weight, progressive dyspnœa, cough and slight fever as the most common manifestations. X-ray findings vary from fine nodular to feathery consolidation localized to isolated lung segments, to widespread bilateral, often symmetrical, confluent densities involving an entire lung. A total of 35 cases have been reported (including those of the authors) with a mortality rate of 34%. The authors discuss the ætiology of the disease and suggest that the cause may be an organism, antigenically related to *Pneumocystis carinii*, rather than inhalation of new volatile agents. The possibility of some virus being the cause of both pulmonary alveolar proteinosis and *Pneumocystis* pneumonia has not been ruled out definitely.

Psoriatic Arthritis.

R. AVILA *et alii* (*Radiology*, November, 1960) state that psoriasis is often accompanied by a characteristic form of arthritis and present the results of a study of the radiological characteristics of the condition in 155 cases, compared with 100 cases of rheumatoid arthritis. Five radiological signs are described which are of importance for the diagnosis of psoriatic arthritis. These are: (i) destructive arthritis involving predominantly the distal interphalangeal joints of the fingers and the interphalangeal joints of the toes; (ii) bony ankylosis of interphalangeal joints of hands and feet; (iii) destruction of interphalangeal joints of hands and feet, with abnormally wide joint spaces and sharply demarcated adjacent bony surfaces; (iv) destruction of the interphalangeal joint of the great toe with bony proliferation at the base of the distal phalanx; (v) resorption of tufts of distal phalanges of hands and feet.

Extraabdominal Abscesses of Intestinal Origin.

J. G. DUNCAN AND E. SAMUEL (*Brit. J. Radiol.*, October, 1960) describe the radiological findings in three cases of extraabdominal abscesses presenting with cellulitis in the groin. In two of these cases the abscesses were on the left side and were due to a carcinoma of the colon; the third abscess presented on the right side and the underlying cause was Crohn's disease of the terminal part of the ileum. The radiological findings in cases such as these are similar to those occurring in other sites, but certain features may suggest an intestinal origin. (*a*) Soft tissue swelling is present; as in other abscesses, soft tissue swelling with blurring of intermuscular planes will be noted with the formation of a homogeneous mass; the continuity of this swelling with the site of origin of the abscess may be demonstrated. (*b*) Gas formation may occur. The presence of gas in the abscess is suspicious of an intestinal origin. This may be due to direct escape of gas from the bowel or due to gas-forming organisms. The gas may appear as numerous small bubbles in the subcutaneous tissues and intermuscular planes or may be aggregated into larger bubbles. A direct continuity may be demonstrated under the inguinal ligament between gas in the thigh and in the pelvis. Gas formation may, of course, occur in an abscess not of alimentary origin due to infection with gas-forming organisms. (*c*) Fæcal material may be present. On occasions fæcal material may be seen within the abscess; the alimentary origin will be then obvious.

The Mechanics of Spinal Injuries.

R. ROAF (*J. Bone Jt Surg.*, November, 1960) states that the basic spinal unit consists of two intact vertebræ joined by an intervertebral disc, two posterior articulations and a number of ligaments. The author describes the results of studies of such spinal units when subjected to forces of different magnitude and direction — compression, flexion, extension, lateral flexion, rotation and horizontal shear. Compression forces are mainly absorbed by the vertebral body. The nucleus pulposus, being liquid, is incompressible. The tense annulus bulges very little. On compression the vertebral end-plate bulges and blood is forced out of the cancellous bone of the vertebral body into the perivertebral sinuses. This appears to be the normal energy-dissipating mechanism on compression. The normal disc is very resistant to compression. The nucleus pulposus does not alter in shape or position on compression or flexion. It plays no active part in producing a disc prolapse. On compression the vertebral body always breaks before the normal disc gives way. The vertebral end-plate bulges and then breaks, leading to a vertical fracture. If the nucleus pulposus has lost its turgor there is abnormal mobility between the vertebral bodies. On very gentle compression or flexion movement the annulus protrudes on the concave aspect—not on the convex side as has been supposed. Disc prolapse consists primarily of annulus; it occurs only if the nucleus pulposus has lost its turgor. It then occurs very easily as the annulus now bulges like a flat tyre. The author has never succeeded in producing rupture of normal spinal ligaments by hyperextension or hyperflexion. Before rupture occurs the bone sustains a compression fracture. On the other hand, horizontal shear, and particularly rotation forces, can easily cause ligamentous rupture and dislocation. A combination of rotation and compression can produce almost every variety of spinal injury. In the cervical region subluxation with spontaneous reduction can be easily produced by rotation. If disc turgor is impaired, this may occur with an intact anterior longitudinal ligament and explains those cases of tetraplegia without radiological changes or a torn anterior longitudinal ligament. The anterior longitudinal ligament can easily be ruptured by a rotation force and in the author's experience the so-called hyperextension and hyperflexion injuries are really rotation injuries. Hyperflexion of the cervical or upper thoracic parts of the spine is an anatomical impossibility. In all spinal dislocations a body fracture may or may not occur with the dislocation, depending upon the degree of associated compression. In general, rotation forces produce dislocations, whereas compression forces produce fractures.

Angiography of Aneurysmal Bone Cyst.

Å. LINDBOM *et alii* (*Acta radiol. (Stockh.)*. January, 1961) state that the radiological appearances of aneurysmal bone cyst are generally regarded as characteristic. A ballooned-out distension of the periosteum is usually outlined by a paper-thin subperiosteal shell of bone under which an eccentric destruction of both the cortex and cancellous bone is evident. The angiographic appearance, however, has not been described in detail. The authors describe three cases in which this procedure was performed with a serial technique. The arteries leading to the lesions were in two of the cases markedly dilated and in the other slightly dilated. During the passage of the contrast medium a slight but definite degree of opacity was noted throughout the whole area of the cyst and had a certain patchy distribution. There was no peripheral hypervascularized zone as in malignant tumours. The veins leading from the lesion were filled earlier than the other veins, indicating an arterio-venous shunt through the lesions; the degree of shunt was, however, considerably less than that in most malignant tumours. The patchy densities in the cystic area persisted late in the venous phase. The increased opacity must be due to the presence of contrast medium in the vascular lumen of the cyst. The authors compared these angiograms with those of five patients with giant cell tumours of bone. In most of the giant cell tumours the opacity was somewhat more intense and more homogeneous than in the cysts. The appearances of these two different processes were, however, not obviously different in all cases, and angiography cannot therefore be relied upon to differentiate between these two conditions.

Hyperplastic Cholecystoses.

J. A. JUTRAS (*Amer. J. Roentgenol.*, May, 1960) states that hyperplastic cholecystosis designates certain gall-bladder conditions that are proliferative and degenerative in nature rather than inflammatory or neoplastic. Consequently, they should be segregated from the miscellaneous group of lesions labelled "chronic cholecystitis", because a more precise diagnosis leads to better treatment. Cholesterolosis, adenomyomatosis and neuromatosis are three forms of hyperplastic cholecystosis of special interest to internists, radiologists and surgeons. They can be diagnosed as individual entities by means of selective and serial cholecystography. Since the three conditions are often associated in the same gall-bladder, it is important to comprehend their combined influence on cholecystographic results. Cholesterolosis is characterized by abnormal deposits of cholesterol esters forming yellow specks, polyps or pseudopapillomas, either solitary

or more often multiple. Adenomyomatosis is defined as a proliferation of surface epithelium with gland-like formations and outpouchings of the mucosa into or through the thickened muscular layer (intramural diverticulosis). Neuromatosis indicates proliferation of autonomous neural elements. A combination of these three conditions induces the gall-bladder to concentrate and expel the contrast medium at too rapid a rate and under excessive pressure. Excess of mucosa is responsible for the hyperconcentration; proliferation of nerve tissue causes hyperstimulation; muscle hypertrophy brings on hyperevacuation. The resulting hyperfunctional syndrome may cause severe and lasting pain, intermittent colics and indigestion, biliary dyspepsia and psychosomatic distress. Each form of cholecystosis may exist singly or conjointly, with or without stones, with or without mucosal congestion. Radiological features, pathological correlation, clinical implications and surgical indications are discussed.

Prolonged Cathartic Abuse Suggesting Enterocolitis.

G. E. PLUM *et alii* (*Amer. J. Roentgenol.*, May, 1960) state that in 27 patients who gave clinical histories of prolonged, excessive use of cathartics, abnormal radiological findings in the colon and terminal part of the ileum consisted of loss of colonic haustrations, smoothness of the mucous membrane seen in relief, often apparent shortening of the right side of the colon, inconstant constriction of segments, and frequent marked distensibility of the colon. Such changes may be limited to the right side of the colon and terminal part of the ileum, or may involve the entire colon. Their appearance may simulate the changes caused by chronic ulcerative colitis for which they have frequently been mistaken by the radiologist. They are caused by the irritant group of cathartics.

Peripheral Bronchial Carcinomas.

T. DREVVATNE AND J. FRIMANN-DAHL (*Brit. J. Radiol.*, March ,1961) discuss a series of peripheral bronchial carcinomas with special reference to the notching or "umbilication" of the periphery of the tumour first described by Rigler in 1955 and declared by him to be a "new sign of malignancy". The true cause of this notching has not yet been completely clarified. Rigler considered the grooves as the hilum of the tumour, corresponding to its vascular supply. The authors stress the value of tomography in the study of the outer contour of the lesion and state that peripheral bronchial carcinomas show a wide variation of bizarre forms. One type is scalloped, with many small indentations; in this there are both shallow and deep indentations, and the tumours are square or elongated. In another group there is marked notching or umbilication, with one or two vessels entering the bottom of the groove, recalling the appearance of an apple stalk. Finally, where is a small group in which the notching is not conspicuous. In this series notching was observed mostly in primary carcinomas, but a similar deformity was also seen in metastases of various origins. To determine whether the umbilication is reliable as a differential sign, all benign "round tumours" were examined and tabulated. The indentation was not seen in benign tumours, such as hamartomas and neurinomas. However, in tuberculomas typical notching of the contour was observed in 16 out of 22 cases. The authors conclude that this sign is not reliable for differentiating between malignant and benign lesions, and that in each case judgement should be reserved as to the real pathology.

RADIOTHERAPY.

Anal Carcinoma.

J. E. DALBY AND R. S. POINTON (*Amer. J. Roentgenol.*, March, 1961) state that at the Holt Radium Institute during the period 1932 to 1955, 171 new cases of anal carcinoma were seen. Thirty-one cases were referred for surgery, 34 were too advanced for treatment, and 106 cases were treated by irradiation. For analysis there were 92 cases—in six cases the condition was regarded as incurable from the start, and in eight it was not histologically proved. The five-year survival rate was 51% and has been achieved in the majority of cases with the preservation of normal function, and with careful planning the complications have not been severe. Anal stricture of marked degree occurred in only one case. The majority of the patients were treated by interstitial single and two-plane radium implants. Occasionally, particularly in the earlier years, volume implants were performed for rather large lesions and were sometimes combined with the intracavitary use of radium. Most of these patients did badly and the method has fallen into disuse. The authors consider that for early and moderately advanced lesions radium implantation provides a satisfactory method of treatment.

Radiation Failures in Cancer of the Cervix.

A. I. SHERMAN (*Amer. J. Roentgenol.*, March, 1961) states that the unexplained persistence of cervical cancer after irradiation with an adequate dose and by a method which should prove successful is the reason for such cancers being labelled "radioresistant". The author has reviewed 422 cases and has evaluated the failures in patients treated since 1950. Of the 124 cases of failure in this series, in 14 the patients died of distant metastases without pelvic involvement; in 87 cases failure was due to persistence of disease in the lateral part of the pelvis with or without distant metastases; in 23 cases disease had persisted locally at the cervix or within 2 cm. of the midline of the upper part of the vagina, and it could be considered that only these failures were due to radioresistance. It is, however, possible that other factors may play a part in such failures, as the application of radium is sometimes difficult because of the anatomical features of the cervix, vagina and the tumour. An assumption that the procedure of radium insertion has been accomplished satisfactorily because it so appears at the time of packing is not necessarily true. In 18 of the 23 cases in which there was local recurrence, X-ray films were available for study, and the doses delivered to various points in the pelvis, and particularly at the sites of recurrence, were calculated. A great discrepancy in dosage has been shown in these cases, and the resultant isodose did not contain the tumour within its cancericidal levels. This is possible because of the type of isodose curve surrounding a radium source; when the proximity of these sources to the cervix and upper part of the vagina is considered, it is seen that distances as short as 1 cm. may cause tremendous differences in the dose received by the tissues. The author considers that his study shows the relative infrequency of radioresistance as the causative factor in radiotherapy failures. He states that this low incidence does not deserve the attention that is being paid to it, and does not justify radical alterations in therapy. The ready acceptance of radiation failures as due to radioresistance is a pitfall to be avoided. Many cases are radiation failures, not because of radioresistance, but because of improper therapeutic techniques of the type indicated.

Evaluation of Radiotherapy in Carcinoma of the Lung.

H. L. BARTON *et alii* (*Dis. Chest*, February, 1960) present a review of 225 patients with non-resectable carcinomas of the lung; 103 patients were given radiotherapy and 122 were treated symptomatically only. All were dead at the time of the study. The longest survival of a patient without X-ray therapy was 22 months, and with therapy it was 42 months; the average survival periods were 1·9 months and 5·2 months respectively. The incidence of reduction of symptoms with X-ray therapy is high—70% of treated patients obtained partial or complete relief of symptoms. The authors conclude that X-ray therapy is a valuable agent in the control of symptoms in inoperable carcinoma of the lung, and may, at times, result in prolongation of life.

Irradiation and Chemotherapy in Mice Tumours.

H. VERMUND *et alii* (*Amer. J. Roentgenol.*, March, 1961) state that investigations of the possible merits of combined chemotherapy and radiotherapy in far advanced malignant disease in human beings have given inconclusive results. Suitable controls were absent, so that an enhanced antitumour effect by the combination could not be proved. Animal experiments which included controls were therefore initiated. Sarcoma 180 transplanted to Swiss Webster albino mice and mammary adenocarcinoma originating spontaneously in inbred Z(C_3H) mice and transplanted for two generations in the same strain were used for combined studies. Treatments with 5-fluorouracil, actinomycin P_3 or "Cytoxan", with fractionated X-ray therapy, resulted in increased inhibition of the growth of the tumours when compared with either chemotherapy or X-ray therapy alone.

British Medical Association.

NEW SOUTH WALES BRANCH: SCIENTIFIC.

A MEETING of the New South Wales Branch of the British Medical Association was held on April 20, 1961, at the Royal North Shore Hospital of Sydney. The meeting took the form of a series of clinical demonstrations by members of the honorary medical staff of the hospital.

Diabetes Insipidus.

DR. I. A. BRODZIAK, DR. R. G. EPPS, DR. D. W. PIPER and DR. P. B. ROWE showed three patients suffering from diabetes insipidus.

The first patient, a woman, aged 21 years, had been admitted to hospital on February 21, 1961, with a history of fatigue, polydipsia and polyuria of 15 months' duration; her average daily fluid exchange was 300 oz. She also suffered from intermittent fronto-occipital headaches. A provisional diagnosis of diabetes insipidus had been made by her local doctor 12 months prior to her admission to hospital, when physical examination and X-ray examination of the skull had revealed no abnormality. She had been treated since with "Piticin Snuff" (protein pituitary extract), which had more or less controlled her polydipsia and polyuria. On her admission to hospital, her past history and her family history were non-contributory. Physical examination, apart from mild bilateral constriction of her visual fields, revealed no abnormality. Treatment with pituitary extract was stopped on her admission to hospital, and there was a consequent great increase in fluid exchange. The augmented Hickey-Hore test confirmed the diagnosis of diabetes insipidus. A number of other investigations were performed. The erythrocyte sedimentation rate was normal, the blood count was normal, the serum protein content was normal, cerebro-spinal fluid studies gave normal results, the Eagle flocculation test gave a negative result and the urinary excretion of 17-ketosteroids was normal. The serum calcium and phosphorus contents were normal, the X-ray appearances of the skull and a coned down view of the pituitary fossa were normal. An electroencephalogram produced a diffusely dysrhythmic and slow record, suggesting the possibility of a diencephalic lesion. A pneumoencephalogram revealed no evidence of a parapituitary lesion. The patient was treated with pitressin in a dosage of 5 I.U. by intramuscular injection three times a week. There was considerable symptomatic improvement, and she was discharged from hospital for further assessment in six months.

The second patient was a woman, aged 64 years, who had been admitted to hospital on March 6, 1961, with a history of polyuria and polydipsia of two years' duration. Her average fluid exchange ranged from 120 to 200 oz. There were no relevant findings in her past or family history. Physical examination revealed no abnormality. An augmented Hickey-Hore test confirmed the diagnosis of diabetes insipidus. A number of other investigations were performed. The blood count, the erythrocyte sedimentation rate and the blood urea content were normal. Microscopic examination of the urine revealed no abnormality. An Eagle flocculation test produced a negative result. The serum calcium and phosphorus contents were normal. X-ray examination of the skull and the chest revealed no abnormality. The patient was treated with pitressin in a dosage of 5 I.U. by intramuscular injection three times a week. Her symptoms were relieved, and she was discharged for follow-up in the out-patient department.

The third patient was a woman, aged 80 years, who had first been admitted to the hospital in 1960, with a history of weakness, lethargy, dysphagia, anorexia and vomiting of 18 months' duration. She also complained of some polyuria and polydipsia. No abnormality was found on physical examination, and numerous investigations gave negative results. The patient's symptoms decreased spontaneously, and she was discharged from hospital without a definite diagnosis having been made. She was readmitted to hospital in January, 1961, again complaining of the same symptoms. On this occasion she was slightly hypotensive and was found to be unduly sensitive to cold weather. Investigation revealed the presence of adrenal and thyroid insufficiency of pituitary origin, and treatment with cortisone was begun. It caused a considerable aggravation of the patient's polyuria and polydipsia, and she passed daily up to 7 litres of urine of low specific gravity. A Hickey-Hore test confirmed the presence of diabetes insipidus, and the patient responded to the administration of pitressin. At the time of the meeting she was free from symptoms and was taking cortisone, thyroid extract and pitressin tannate. The ætiology of the pituitary insufficiency was unknown. A number of investigations had been carried out. The blood count was normal, and X-ray examination of the chest and the skull revealed no abnormality. The serum calcium and phosphorus contents and the blood sugar level were normal. The urinary excretion of 17-hydrocorticosteroids (0·3 mg. per 20 oz.) rose to 6·5 mg. one day after the administration of ACTH. The uptake of ^{131}I was zero, but it rose to normal after the administration of thyroid-stimulating hormone. The result of a Hickey-Hore test was consistent with diabetes insipidus.

Cavernous Sinus Thrombosis.

DR. DOUGLAS ANDERSON showed a man, aged 26 years, who had developed a stye, then cavernous sinus thrombosis, then œdema of the other orbit with conjunctival chemosis. Cavernous sinus thrombosis was suspected at the time of his admission to hospital, when his temperature was 104·8° F. A blood culture yielded staphylococci which were sensitive to chloramphenicol and to erythromycin, but not to vancomycin. Dr. Anderson said that an interesting feature was bradycardia, presumably due to increased orbital pressure; but the blood pressure was not raised, as it would have been had the intracranial pressure been elevated. Dr. Anderson said that the patient was making a good recovery. There had been no signs of suppuration. His vision was unimpaired, but at the time of the meeting, three weeks after the beginning of the illness, both lateral rectus muscles were paralysed.

Disseminated Lupus Erythematosus.

Dr. Anderson also showed a man, aged 56 years, who had been ill for six months with vague upper abdominal pain, night sweats and pyrexia, his temperature rising to 103° F. He had recently been in a mental hospital on account of what was described as paranoid schizophrenia, but mental disorder was no longer apparent. On examination of the patient, enlargement was found of the liver (to 4 cm. below the costal margin in the mid-clavicular line) and of the spleen (to 2 cm. below the costal margin). The hæmoglobin value was 14·8 grammes per 100 ml., and the leucocytes numbered 1100 per cubic millimetre, both granulocyte and leucocyte counts being reduced. The prothrombin index was 73, the serum bilirubin content was 0·4 mg. per 100 millilitres, the thymol turbidity was 2·3 units, the zinc sulphate turbidity was 4·5 units, the serum alkaline phosphatase content was 15 King-Armstrong units, and the Eagle flocculation test produced a negative result. The serum protein content was 6·1 grammes per 100 ml. (albumin 2·9, globulin 3·2). Marrow biopsy showed reduction of granulopoiesis, but otherwise no abnormality. Liver biopsy showed no abnormality. At first intoxication with chlorpromazine was suspected, and treatment with that drug was discontinued. However, a search for the lupus erythematosus phenomenon revealed large numbers of L.E. cells in the peripheral blood. In hospital the disease appeared to undergo spontaneous remission. Pyrexia resolved, the patient began to feel well and the leucocyte count rose to 3600 per cubic millimetre. Accordingly steroid therapy was still being withheld at the time of the meeting.

Œsophageal Stricture.

MR. E. GOULSTON showed a man, aged 36 years, a labourer from the country, who had presented himself in February, 1961, complaining of vague abdominal discomfort and an infected wound. At the age of 11 months he had swallowed caustic soda and been admitted to the Royal Alexandra Hospital for Children, where a gastrostomy was established. The patient had led a gastrostomy life ever since, being completely unable to swallow food or fluids. He was able to retain his saliva for up to two hours, and then regurgitated it. He had married and was the father of two children. His family now wished him to be more social. He had changed the gastrostomy tube himself every two or three months. On examination of the patient, he was found to be a sparse individual in good condition. An old, slightly infected gastrostomy wound was evident, but there was no other abnormality. The upper portion of the œsophagus was examined after the patient had swallowed barium, the lower portion after barium had been injected through the gastrostomy tube. Mr. Goulston said that the upper part was considerably dilated and ended blindly just below the level of the sternal notch above the upper level of the aorta. The upper end of the lower portion of the œsophagus was at the level of the seventh thoracic vertebra, so that the atretic section of the œsophagus was about 3·5 inches in

length. The œsophageal hiatus was very wide, and there was almost certainly some of the fundus above the diaphragm. It was proposed to reconstitute the œsophagus.

Wound Drainage in General Surgery.

Mr. Goulston showed several types of drainage tubes. He said that the question of drainage was not influenced by the administration of antibiotics. It was impossible to drain the general peritoneal cavity, but it was often useful to drain down to the peritoneum. Drainage was indicated in abscess cavities, to prevent collections of blood and serum and to prevent any dead space. Areas commonly drained in the abdomen were the flanks, the subhepatic areas after cholecystectomy, and the region of a duodenal stump. Drainage was established after splenectomy if the tail of the pancreas was vulnerable. The thyroid bed was drained through the sterno-mastoid muscle. Suction drainage was employed after radical mastectomy or dissections of the groin. Drainage was usually through a stab wound to encourage primary wound healing. Mr. Goulston emphasized that wound drainage was only an adjunct of good surgical management and technique.

Chronic Osteomyelitis of the Humerus.

MR. T. ROSE showed a waterside worker, aged 70 years, who had been well until January, 1959, when he had first noticed a painless swelling under the skin of the left side of his chest wall. The swelling had burst and discharged pus, and had remained as a discharging sinus. Although the swelling and sinus were excised in January, 1960, the swelling recurred in October, 1960, and a further painless discharging sinus appeared in the same position as previously. Examination of the patient disclosed a small sinus discharging pus (later shown to be sterile) on the left side of the chest wall, at the level of the mid-shaft of the sixth rib. A probe inserted into the sinus went in about 2 inches approximately. The chest was clinically normal, as was the left upper extremity. Shoulder movements were normal. A sinugram showed that the dye went up in the subcutaneous tissue of the chest wall, and across the floor of the axilla into the medial side of the upper shaft of the left humerus, which was the seat of widespread chronic osteomyelitis. In December operation was performed on the humerus from the lateral aspect. The area of osteomyelitis was curetted and the wound was sutured. The sinus was not touched. Histological examination of the curetted bone revealed inflammatory changes only, with no evidence of tuberculosis or neoplasm. Later culture revealed no organisms at all.

A follow-up examination in March, 1961, showed that the patient, who was back at work as a waterside worker, had only slight limitation of abduction at the left shoulder. The sinus had healed. Mr. Rose said that the patient had thus had quiet chronic osteomyelitis of the left humerus of unknown ætiology. The inflammatory process tracked across the axilla to the chest wall.

Undiagnosed Cyst of the Sternum.

The second patient shown by Mr. Rose was a man, aged 49 years, who had complained of pain under the lower part of his sternum for one month. Examination of the patient revealed no abnormality. An electrocardiogram was normal, as were a full blood count, the erythrocyte sedimentation rate and the result of a Wassermann test. X-ray examination of the sternum disclosed a round radiolucent area in the lower part of the body of the sternum. The edges were clear cut, and there was no osteosclerosis. The patient had been advised to have the area explored, but so far had declined.

Abdominal Carcinomatosis.

Mr. Rose then showed a female patient, aged 75 years, who had been perfectly well until five months prior to her admission to hospital. She had then developed swelling of the feet and legs, which had slowly subsided and disappeared prior to her admission. Four months prior to her admission, her abdomen had become very swollen. That swelling had again diminished, but not completely. For two months prior to her admission, the patient had had loss of appetite and some difficulty in swallowing. She had lost weight during that time. Three weeks prior to her admission she had vomited coffee-ground material, and had suffered from diarrhœa for two days afterwards. On examination, the patient was seen to be wasted and to have an enormous swelling of the abdomen, especially on the right side. The swelling was so large that it impeded her breathing. There were many distended veins visible in the abdominal wall. Pelvic and rectal examination revealed no abnormality. Examination of the chest revealed poor respiratory excursion, and there was fluid at the base of both lungs, more in the right than the left. Pathological tests disclosed blood in the stools, a hæmoglobin value of 9·1 grammes per 100 ml. and achlorhydria. A barium-meal X-ray examination revealed a large mass in the right upper quadrant of the abdomen, displacing the abdominal organs downwards and to the left and raising the right hemidiaphragm.

At operation a large encysted mass of fluid was found occupying the right side of the abdomen. There was gross smooth thickening of all serous surfaces, in places 10 mm. thick; the wall of the cyst was formed by that thick visceral peritoneum. There were so many adhesions that the rest of the abdomen could not be explored. The microscopic picture was that of adenocarcinoma. Mr. Rose said that the patient was now receiving cobalt beam therapy. The interesting feature was the microscopic appearance of the carcinoma, which mimicked chronic serositis. The patient was too ill for detailed investigation of the source of the primary carcinoma.

Endometriosis of the Caecum and Sigmoid Colon.

Mr. Rose finally showed a woman, aged 30 years, who had two children, aged respectively 10 and eight-and-a-half years. She had been trying unsuccessfully to have further children. Six years after the birth of the last child, two and a half years prior to her admission to hospital for her last operation, she had had total hysterectomy and double salpingo-oophorectomy for generalized pelvic endometriosis. In addition there was a small tumour in her caecum and one in her sigmoid colon. Biopsy only of both tumours was performed, and endometriosis was found in both. The patient then remained well for two years, when she began to suffer from colicky lower abdominal pain with rectal bleeding (mainly melæna). Examination of the patient at that time, including rectal and pelvic examination, revealed no abnormality. Occult blood was present in the fæces. A barium-meal and barium-enema X-ray examination revealed no alimentary lesion. Sigmoidoscopic examination revealed a normal rectum and normal condition of the distal part of the colon. Laparotomy was then performed. This revealed a large, hard nodule in the anterior caecal wall and a similar nodule in the recto-sigmoid colon. Total hysterectomy with removal of both Fallopian tubes and ovaries had been performed. The caecal tumour was removed locally and was shown to be endometriosis.

The patient then remained well for four months, when episodes of further colicky lower abdominal pain began, associated with distension of the abdomen and constipation culminating with relief in diarrhœa, at times with the passage of blood. Consequently, four months later laparotomy was again performed, and revealed a complete, thick fibrous band around the recto-sigmoid colon. Bowel resection was performed, and the patient had remained well over the two months since operation. The lesion was shown to be endometriosis. Mr. Rose said that the interesting feature of the case was the onward march of the bowel endometriosis in spite of the loss of both ovaries some two and a half years previously.

Traumatic Aortico-Caval Fistula following Lumbar Intervertebral Disc Surgery.

MR. G. D. TRACY showed a man, aged 25 years, a butcher, who had strained his back at work two and a half years previously, and had developed severe back pain accompanied by pain radiating to the left leg. The pain persisted, and was later associated with weakness of the leg. Conservative treatment with physiotherapy and support produced only moderate improvement, and the patient was admitted to hospital on November 27, 1960, for surgical treatment. Examination of the legs revealed no obvious wasting, but there was diminished power in the left leg, with decreased sensation in the first and second sacral dermatomes. The ankle jerk was absent, and straight leg raising was limited to 70°. Examination of the spine revealed stiffness with muscular spasm and tenderness over the lower lumbar spines. The pulse rate was 76 per minute, the blood pressure was 120/80 mm. of mercury, and there were no other relevant physical findings. On November 28, a myelogram showed no abnormality.

On November 30 laminectomy was performed, and a degenerate fourth lumbar vertebral disc was revealed. This was removed with curettage, and the space was packed with bone chips. Bleeding was not extraordinary, and the loss, measured by sponge weighing and aspiration during the operation, was 700 ml. The patient's condition was satis-

factory after operation except that he developed tachycardia, the rate varying between 110 and 140 per minute. After several days a loud systolic bruit was discovered in the abdomen, together with a systolic thrill in the right femoral artery. The blood pressure was 130/70 mm. of mercury, and occlusion of the aorta produced slowing of the pulse. The diagnosis of arterio-venous fistula was made, and a transfemoral aortogram on December 6 revealed a aortico-caval fistula.

On the following day abdominal exploration was carried out. This revealed a large pulsating retroperitoneal hæmatoma with a readily palpable thrill. Incision of the peritoneum produced free hæmorrhage, which was controlled by placing vascular clamps on the three limbs of the aortic and inferior vena caval bifurcations. After local instillation of dilute heparin, a hole in the inferior vena cava near the entry of the left common iliac vein was repaired with number 0000 arterial silk. The right common iliac artery, detached from its origin, was repaired with a "Teflon" prosthesis to bridge the gap between the aorta and the retracted artery, end-to-end anastomoses being sutured with number 0000 silk. The operation lasted two and a half hours, and the blood loss as measured was 2400 ml. This was replaced with whole blood. The patient made a satisfactory recovery, with no evidence of caval obstruction and with normal pulses in the legs. The pulse rate slowed to 80 per minute, and the patient was discharged from hospital on December 30. At the time of the meeting his condition was satisfactory, and there was no evidence of vascular abnormality in the limb. The back pain had been relieved.

Temporal Lobe Epilepsy of Late Onset, Cured by Partial Temporal Lobe Ablation.

DR. G. SELBY, DR. E. DAVIS, DR. J. M. F. GRANT and MR. R. G. RUSHWORTH showed a woman, aged 43 years, who had first been examined in February, 1960. Briefly her history was that of epileptic seizures, which had first begun at the age of 39 years. Two types of seizures had been manifested by the patient over that period. The first was the so-called psychical seizure of Penfield, of which *déjà vu* phenomena, depersonalization, strangeness and brief automatism formed the main features. The second type was *grand mal*, of which she had experienced some 10 or 11 seizures interspersed among the very frequent psychomotor episodes. Clinical examination of the patient's central nervous system revealed no florid abnormality. There was a questionable increase of the muscle stretch reflexes in the left limbs. Surface electroencephalograms repeatedly showed focal dysrhythmia over the right temporal lobe. A basal emplacement electroencephalogram, obtained with temporo-sphenoidal needles inserted during light "Pentothal" anæsthesia, confirmed the presence of an active discharging focus in the right temporal lobe. A pneumoencephalogram revealed nothing significant in the shape or position of the temporal horns. Despite adequate anticonvulsant medication, the patient continued to have many seizures and her personality deteriorated.

On October 28 she was submitted to craniotomy. Electrocorticograms confirmed the presence of high voltage spiking from the temporal cortex. At operation Mr. Grant removed the anterior 5 cm. of the temporal lobe. The patient made an uninterrupted recovery, and had been completely free of seizures for five months. Her personality status had returned to normal. The specimen was submitted to Dr. Brian Turner for histological examination, which revealed the presence of a vascular hæmatoma in the temporal cortex.

Stereotactic Brain Surgery in the Relief of Intractable Pain.

Dr. Selby, Dr. Davis, Dr. Grant and Dr. Rushworth then presented a discussion of the use of stereotactic brain surgery for the relief of intractable pain. It was pointed out that intractable pain, as the very name implied, was one of the most difficult problems met with in medical practice. Various neurosurgical procedures, such as section of the dorsal nerve roots and spino-thalamic tractotomy, or division of the trigeminal root, had succeeded in giving relief to some of those unfortunate patients. Prefontal leucotomy had also been used in certain selected cases. By that method, the intensity of the pain was not diminished, but the reaction of the patient to his suffering was altered. Human stereotactic brain surgery for the relief of intractable pain had been introduced by Wycis and Spiegal in 1949, and since then several series of cases had been reported from Germany and France. A summary of the results reported in the literature indicated that intractable pain could be successfully relieved in about 50% of cases by those procedures. The post-operative mortality varied from 12% to 16% and did not seem to be excessive, in view of the fact that many patients were of advanced age and were poor operative risks. The operation was similar to that used for the relief of Parkinson's disease. With the aid of a stereotactic instrument, an electrode could be introduced accurately into a subcortical nucleus. The correct placement of the electrode could be confirmed by stimulation experiments, and the nucleus was then destroyed by diathermy coagulation. When the pain was due to post-herpetic neuralgia, to advanced malignant disease or to a painful phantom limb, the sensory relay station in the thalamus (the posterior ventral nucleus on the appropriate side) could be selectively destroyed by that method. In other cases, in which the pain appeared to be emotionally elaborated, the dorso-medial nuclei of the thalamus on both sides were destroyed. Those nuclei projected to the prefrontal area, and that operation was therefore a variation on a leucotomy, but did not produce quite the same degree of intellectual and emotional deficit as prefrontal undercutting. It was pointed out that the group had performed stereotactic operations for intractable pain on 10 patients. One of those patients, aged 71 years, had died from cardiac infarction two weeks after operation. Of the remaining nine, six had received significant relief from pain, one had had partial relief, and in the other two the intensity of the pain was not influenced. The operations were performed for post-herpetic neuralgia, for the thalamic syndrome, atypical facial neuralgia, and intractable pain which appeared to be emotionally determined and had not responded to other forms of psychiatric treatment.

One of the patients was presented. She was a housewife, aged 45 years, who had had left radical mastectomy in 1955. However, histological examination excluded carcinoma, and showed only hormonal mastopathy. The wound was slow to heal and was repaired with skin grafts. Since that operation the patient had suffered from persistent pain in the scar, unrelieved by analgesic drugs and sedatives. Dorsal rhizotomy of the second and fifth thoracic posterior roots relieved her pain for three weeks only, and then she became unable to care for her home and children, was depressed and had attempted suicide. In October, 1958, both dorso-medial nuclei of the thalamus were destroyed by diathermy coagulation. The patient was confused for a fortnight after operation, but then improved, and her family and friends had not observed any intellectual or emotional impairment as a result of the operation. Since then she had remained free from pain and had resumed her usual domestic duties.

It was pointed out that while the number of patients operated on was still small, the success achieved in individual cases showed that stereotactic brain surgery had a place in the relief of pain which by its nature and pathogenesis was otherwise intractable.

Mucous Impaction of the Bronchi.

DR. A. G. MCMANIS showed a female patient, aged 20 years, who had suffered since childhood from asthma with intermittent productive cough. She had had an hæmoptysis associated with pneumonia in June, 1959. Three weeks before her admission to the Royal North Shore Hospital in October, 1960, she had had left-sided pleurisy and pneumonia, which responded very slowly to antibiotics. Two days prior to her admission to hospital she had had a small hæmoptysis. On her admission to hospital she was found to have bilateral areas of consolidation in her lungs, with the suggestion of a pulmonary abscess. Tomograms taken shortly after her admission showed an air-containing space in the apical segment of the lower lobe of the left lung surrounded by an area of consolidation. After a further 10 days, X-ray films showed clearing of the consolidation. On October 26, a bronchogram showed air-containing spaces in several areas, with small pools of opaque medium. The appearances were consistent with mucous impaction. The bronchoscopic findings were normal. The patient was treated with breathing exercises and postural drainage, and the X-ray abnormalities rapidly disappeared. Physiotherapy was continued in the out-patient department. A number of investigations were carried out. A blood count gave the following findings: the hæmoglobin value was 13·2 grammes per 100 ml., the leucocytes numbered 11,100 per cubic millimetre with normal distribution, and no L.E. cells were found. No pathogens were found in the sputum. The response to the Mantoux test was negative. The serum protein content was 7·5 grammes per 100 ml. (albumin 3·8, globulin 3·7). Electrophoresis showed a slight increase of the gamma globulin fraction.

Bronchial Tuberculosis Presenting as Bronchial Asthma.

DR. J. ISBISTER and DR. P. BAUME showed a man, aged 29 years, who had worked as a field engineer with the Snowy Mountains Authority. In May, 1960, whilst so working, he had developed bronchospasm, which occurred in bouts and became associated with cough and sputum. He had been admitted to the Royal North Shore Hospital in August with bronchitis and asthma for investigation. The patient did not react to the Mantoux test, and a chest X-ray film showed no abnormality. Tomography revealed an ill-defined lesion in the posterior segment of the upper lobe of the right lung, which disappeared suddenly. However, his sputum was found by examination of smears and deposits and by culture to contain acid-fast bacilli; it continued to do so until February, 1961, when the first negative result was obtained on culture. The bacilli were pathogenic to the guinea-pig. The patient had been Mantoux-negative since his admission to hospital, in spite of monthly testing with old tuberculin (1:1000). A bronchoscopic examination early in his illness had revealed some small nodules opposite the right upper lobe orifice. Biopsy specimens were taken from the nodules, but they proved to be non-specific inflammatory tissue. Since then the patient had been treated with anti-tuberculosis therapy for the tuberculosis, and also with a variety of drugs for the asthma, which had proved very difficult to control. All the usual bronchodilator drugs were used with various types of sedation, but the bronchospasm proved persistent and refractory. Eventually he was given prednisone in a dose of 10 mg. per day, and since then he had been free of wheeze and had gained weight. The comment was made that the diagnosis of bronchial tuberculosis was based upon four points: (i) the persistently positive sputum findings; (ii) the normal X-ray findings in the chest; (iii) the absence of any evidence of an associated illness to account for the asthma, which was thought to be due to the Koch's infection; (iv) the bronchoscopic finding of "tubercles". The patient had a mild personality disorder which might aggravate his illness, but it was not sufficient to be implicated as a cause. His wife had in the past been treated for tuberculosis on the basis of abnormal X-ray findings, but she had never had acid-fast bacilli in her sputum.

Periarteritis Nodosa Presenting as Bronchial Asthma.

Dr. Isbister and Dr. Baume then showed a female patient, aged 38 years, who had been admitted to hospital on March 17, 1960, with asthma, which had been occurring intermittently for five years. In 1957 she had suffered from a bout of angioneurotic œdema. Her asthma on the occasion of her admission to hospital was associated with hypertension, her blood pressure being 170/100 mm. of mercury, with fever and with some purple nodules on her elbows and heels. She responded poorly to the usual régime of bronchodilator drugs, but responded quickly to hydrocortisone, which was continued for a period after her discharge from hospital. A blood count showed a total white cell count of 22,000 per cubic millimetre, 7% being eosinophils.

The patient was readmitted to hospital in December with an exacerbation of her wheezing. Her blood pressure was then 160/110 mm. of mercury. Examination of the urine revealed persistent proteinuria, and pyuria and hæmaturia were evident on microscopic examination. The serum globulin level was 4·6 grammes per 100 ml., and serial white cell counts showed persistent eosinophilia. Liver biopsy produced normal findings, and a renal biopsy showed angiitis, which was consistent with periarteritis nodosa or allergic angiitis. Again steroids were given and the patient responded well. It was stated that the patient had been discharged from hospital on maintenance steroid therapy, which was to be continued indefinitely in small dosage. She had continued to improve symptomatically and had gained weight. The comment was made that asthma of late onset could occasionally be a manifestation of a multi-system illness. Evidence that pointed to that type of illness included features shown by the patient under discussion: (i) renal involvement, especially proteinuria and hæmaturia; (ii) hypertension; (iii) lumpy skin rashes; (iv) persistent eosinophilia; (v) hyperglobulinæmia; (vi) biopsy evidence of disease.

Disseminated Carcinoma of the Breast Presenting as Bronchial Asthma.

Dr. Isbister and Dr. Baume finally discussed the case of a woman, aged 59 years, who had died on February 5, 1961. In 1946 the patient had undergone a left radical mastectomy for breast cancer. In 1957 she had developed wheeze, dyspnœa with cough and sputum, and hæmoptysis, and secondary deposits had been discovered on radiological examination of the chest. She was treated with deep X-ray therapy, and her condition improved. It had been noted as early as 1957 that she had an "audible wheeze". In that year a bronchoscopic examination had revealed that the right bronchus was obstructed by a tumour, and carcinomatous tissue was obtained by biopsy from the right main bronchus. In 1959 it was obvious that she had inspiratory stridor, and in 1960 her dyspnœa was extreme. A laryngoscopic examination at that time revealed that the left vocal cord was in the cadaveric position. Tracheotomy was performed as a palliative procedure late in the illness.

The comment was made that it was important in differential diagnosis to separate respiratory difficulty manifesting itself as inspiratory stridor (obstruction of major bronchi) and that manifesting itself as expiratory wheeze. In the case under discussion, it appeared in retrospect that the "wheeze" was only evidence of bronchial obstruction.

Infantile Pyknocytosis.

DR. M. J. HARRIS showed a male child, aged three months, who had been born normally at term and weighed 7 lb. 3 oz. at birth. He was the first baby of a healthy single woman, who had had an uneventful pregnancy. The baby showed no signs of any disturbance until early in January, when he was found to be pale, and his hæmoglobin value on January 4 was 9·9%. By January 10 it had fallen to 6·3%. Investigation excluded anæmia of blood loss and also disease of the kidneys. A full hæmatological investigation led to the diagnosis of hæmolytic anæmia due to infantile pyknocytosis, the characteristic cells appearing in smears of peripheral blood. They were small, distorted, densely stained erythrocytes with a variable number of spiny projections. There was no evidence that the hæmolytic process was due to any other factors. Dr. Harris commented that in Zuelzer's original series of 11 cases published in 1959, seven of the patients presented with jaundice within the first three or four days of life. Of the remaining four, two presented with anæmia at the age of two to three weeks, and two with jaundice and anæmia at that stage. Three of those four were premature. The patient being shown was an example of the less usual presentation of a disorder which was almost certainly not so rare as the literature suggested. The baby, at the age of three months, had a hæmoglobin value of 11·7% and a very low pyknocyte count. One expected the baby to have no detectable hæmatological abnormality within the next few weeks or months at the most.

Hodgkin's Disease Associated with Jaundice.

DR. G. S. NAGY showed a woman, aged 34 years, who had first presented herself in July, 1960, with a history of enlarged lymph nodes in the left cervical region for the past two years. They had increased greatly in size in the two months preceding her admission to hospital, and she also complained of lassitude, anorexia, night sweats and the loss of one-and-a-half stone in weight. On examination of the patient, large discrete lymph nodes were felt in the left cervical region. The blood pressure was 100/65 mm. of mercury, and the patient was febrile. Investigations revealed a hæmoglobin value of 11·2 grammes per 100 ml.; the leucocytes numbered 4100 per cubic millimetre and the erythrocyte sedimentation rate was 59 mm. in one hour. Biopsy of a cervical node revealed the presence of Hodgkin's disease, and the patient was given a course of deep X-ray therapy.

The patient recovered well until October, when she was readmitted to hospital with further loss of weight, anorexia, nausea and vomiting, and fever. It was noted that she was more darkly pigmented than previously, and her blood pressure was only 90/60 mm. of mercury. It was considered that the Hodgkin's disease was further complicated by adrenal insufficiency, and the patient was given steroid therapy to which she seemed to respond favourably. She was discharged, symptom-free, taking 25 mg. of cortisone acetate per day. During that admission she was again found to be anæmic, and required blood transfusion.

She was once more admitted to hospital in February, 1961, with a recurrence of the anæmia. Her cortisone requirements had increased, and she was receiving 125 mg. of cortisone per day. She was also given "Nilevar" and again required blood transfusion. Several weeks later her condition again deteriorated, and fever, nausea and vomiting recommenced. She also appeared to be jaundiced. Liver function tests were carried out on March 23 and on April 6, and on those two dates respectively the findings were obtained: serum bilirubin, 1·9 mg. and 0·5 mg. per 100 cubic millimetres; zinc sulphate turbidity, 0·4 and 0·5 units; thymol turbidity, 4·4 and 6·1 units; serum albumin content, 4·1 and 3·2 grammes per 100 ml.; serum globulin content,

3·0 and 2·9 grammes per 100 ml.; serum alkaline phosphatase level, 8·6 and 14 King-Armstrong units. On March 23, the S.G.O.T. level was 70 units. She again had anæmia, her hæmoglobin value being 8·1%, and she was febrile. No lymphadenopathy or hepato-splenomegaly was present. It was considered that the patient had severe systemic manifestations of Hodgkin's disease, and so treatment with nitrogen mustard was indicated. She was given 10 mg. of nitrogen mustard by intravenous injection, and had since been afebrile and symptom-free.

Gastro-Intestinal Hæmorrhage due to Duodenal Polyp.

Dr. Nagy then showed a man, aged 38 years, who had first presented with severe malæna in December, 1958, when he had required blood transfusion. X-ray examination with a barium meal at that time had disclosed no gastro-intestinal lesion. He had developed jaundice, which was thought to be obstructive, and had undergone cholecystectomy in January, 1959, but no gall-stones were found. Since then he had had recurrent attacks of abdominal pain, rather colicky in nature. Occasional attacks of vomiting had occurred, but his appetite was good, and his weight had remained stationary. There was no further jaundice. Melæna recurred in December, 1960. X-ray examination with a barium meal showed doubtful irregularity in the prepyloric area. On gastroscopic examination no lesion could be detected, but a further attack of melæna occurred. A further barium-meal X-ray examination in January, 1961, disclosed no abnormality in the stomach, but there was a crescentic filling defect in the third part of the duodenum, the appearance being suggestive of a large polyp. The proximal part of the duodenum was distended. Mr. V. H. Cumberland had performed duodenotomy and had removed a large polyp, which had three superficial ulcers on its surface. The patient made an uneventful recovery. Mr. Nagy reported that on histological examination the polyp appeared to be a simple adenoma.

Atrial Septal Defect with Pulmonary Hypertension.

DR. D. S. STUCKEY, DR. R. G. EPPS and DR. Z. FREEMAN showed a female patient, aged 34 years, who had been referred for specialist cardiac opinion in 1955 because of grade II dyspnœa, mild orthopnœa and the radiological finding of an abnormally prominent pulmonary artery. On examination of the patient, her pulse was normal and her jugular venous pulse was normal; there was increased right ventricular activity with pulmonary artery pulsation on palpation. On auscultation, there was a barely audible systolic murmur maximal in the pulmonary area, a loud early diastolic murmur in the pulmonary area and a loud second sound in the pulmonary area, the split being wider than normal and fixed on respiration. Cardiac catheterization in 1955 had proved the presence of an atrial septal defect complicated by pulmonary hypertension, the pulmonary artery pressure being 52/20 mm. of mercury and the pulmonary flow being twice the systemic flow. The patient had not returned to the Cardiac Clinic until recently, when catheterization had revealed no deterioration, the pulmonary artery pressure being 60/25 mm. of mercury. Closure of the defect by means of cardiac by-pass was projected for later in the year.

Isolated Limb Perfusion in the Treatment of Cancer.

DR. T. REEVE showed a woman, aged 41 years, who had undergone excision of the right second and third toes for a melanoma on their under surface in November, 1959. Right inguinal node dissection at that time failed to reveal evidence of metastases. In July, 1960, she noted lumps developing under the skin or her leg and thigh. They showed bluish through the skin and varied in size from 0·25 to 1·0 cm. in diameter. On July 22, the right femoral artery and vein were cannulated, and the limb was perfused with 40 mg. of nitrogen mustard, the total dosage being given in four divided doses of 10 mg. at intervals of five minutes, each dose being preceded by 7·5 mg. of papavarine. Perfusion was carried out with a pump oxygenator for a total of 40 minutes. A tourniquet was placed around the groin, and the leak of ^{51}Cr from the extracorporeal circuit to the systemic circulation was only 2%. After operation, considerable heat and erythema developed in the limb and some lesions regressed. Dr. Reeve said there had been complete regression and no recurrence of lesions below the knee. Of the remainder, some had diminished, but others, while not advancing, were treated by the intravenous administration of "Endoxan" (2 grammes) and nitrogen mustard (40 mg.) on November 2, and with "Alkeran" given by mouth in a dosage of 12 mg. per day for three weeks in March, 1961. The lesions had been arrested, but were not cured.

Dr. Reeve also showed a female patient, aged 56 years, who had been admitted to hospital on September 19, 1960, complaining of a hard, fixed, non-tender lump on the medial border of the middle and lower thirds of her left leg. She had had a mole in that site for most of her life, but 10 months previously it had begun to grow and ulcerate. It was excised in February, 1960. The histological findings were those of malignant melanoma. Three weeks prior to her admission to hospital she had noted recurrence of the lump around the excision. The tumour was 7·0 by 5·0 cm. in size and was fixed to the skin and underlying tissues; there were numerous hard nodes in the inguinal region. No evidence of other spread was found.

Under general anæsthesia, exploration of the iliac vessels revealed no evidence of metastatic melanoma. A block dissection of the inguinal lymph nodes was carried out, and the limb was perfused through the femoral artery and veins with 4 grammes of "Endoxan" and 10 mg. of nitrogen mustard. Care was taken to cover the femoral vessels with sartorius muscle before completion of the operation. On histological examination, the lymph nodes were found to be replaced by melanocarcinoma. The patient's obesity made difficult satisfactory occlusion of the lateral vessels with a tourniquet, and leakage from the circuit to the systemic circulation as measured by ^{51}Cr activity was high. As a result of the leakage the patient suffered white-cell depression (1100 white cells per cubic millimetre) and *Staphylococcus aureus* septicæmia developed. It was controlled by 10 days' treatment with vancomycin given intravenously in a dosage of 500 mg. twice a day. The flaps of the inguinal dissection sloughed, but the sartorius provided adequate cover for the femoral vessels. The melanoma of the leg decreased a little in size and became mobile. On October 30 the inguinal wound was skin grafted and the lesion on the leg excised with a wide margin of normal tissue, the dissection being carried down to and including muscle fascia, and the bare area was skin grafted. The tumour was active melanoma. The patient recovered rapidly from her second operation, and at the time of the meeting was still free of evidence of melanoma.

Cretinism due to Placental Transfer of Thyroid Antibodies.

DR. CLAIR ISBISTER and DR. I. HALES discussed a family in which the mother and three of four children had thyroid disease. The first child, a girl, had died at the age of nine months from acute leukæmia, but no thyroid abnormality was noted. Briefly the clinical histories of affected members of the family were as follows. The mother, aged 31 years, had had a goitre since the age of 12 years. She had had intermittent episodes which resembled thyrotoxicosis, but were probably exacerbations of thyroiditis. The diagnosis was confirmed by thyroid biopsy. The second child, a girl, aged 11 years, was diagnosed as being a cretin at the age of three months. She had been treated satisfactorily with thyroid extract. At the time of the meeting she was clinically euthyroid and was doing well at school, being near the top of her class. The protein-bound iodine uptake was normal. The next child, a girl, aged six years, had been treated for cœliac disease, asthma and other allergies. She was clinically euthyroid, but had a small diffuse goitre. The protein-bound iodine uptake was normal. The third child, a boy, aged six months, had soon after birth had an hæmorrhagic episode which required blood transfusion. He failed to thrive and required tube feeding. On examination he was found to have a small goitre, umbilical hernia and a large tongue. Cretinism was suspected, and its presence was confirmed by low protein-bound iodine uptake and by the electrocardiographic response after the administration of the acetic acid analogue of thyroxine. Treatment was begun with thyroxine in a dosage of 0·05 mg. increased to 0·1 mg. after two days. There was an immediate response, and the child had continued to thrive. It was pointed out that the transfer of antibodies to thyroglobulin had been suggested as a cause in some cases of cretinism. In the family presented, the cretinism in two children was probably due to transferred antibodies. The significance of the thyroid enlargement in the second child presented was not clear.

The Assessment of Aortic Stenosis.

DR. G. L. DONNELLY and MR. I. MONK presented methods used in the assessment of aortic stenosis, emphasis being laid on the value of electrocardiography and tomography in assessing the severity of pure aortic stenosis. The difficulty of assessing the degree of obstruction in forms complicated by incompetence and mitral stenosis was also stressed. The criteria used were based on the pressure gradients recorded at left ventricular puncture in 73 cases.

Protein-Losing Gastroenteropathy.

DR. D. W. PIPER and DR. M. C. STIEL arranged a demonstration on protein-losing gastroenteropathy. They showed the ætiology, pathology, clinical features and diagnosis of that group of conditions.

Detection of Early Carcinoma of the Uterus.

MR. W. H. PATTERSON gave a demonstration of the methods that could be used in the detection of early carcinoma of the uterus.

Out of the Past.

DISMISSAL OF MEDICAL OFFICERS IN COUNTRY HOSPITALS.[1]

[From the *Australasian Medical Gazette*, June 20, 1902.]

SEVERAL CASES have occurred recently in which medical officers of country hospitals have been dismissed at very short notice without any reason being given or obtainable. This is a great injustice to the medical men in question, and it should be the part of all their professional brethren to see that they obtain a fair hearing and justice. One case occurred at Balranald (New South Wales) and the other at Queenstown (Tasmania), and as far as can be ascertained, in both cases the medical men have been treated with scant courtesy, and almost ruined financially. Committees of hospitals, as we all know, are made up of all sorts and conditions of men, in many cases actually deriving business benefits from their connection with the hospitals, and some of them not at all particular as long as their own selfish ends are obtained. This ought not to be, and there should be some redress for medical men against the ill will of such people and some association of our profession should take this matter up and see it through to the end.

Correspondence.

OPERATING THEATRE DEATHS AND THEIR PREVENTION.

SIR: Dr. Robert Speirs' observations upon the pathogenesis of operating theatre deaths and their prevention has prompted us to bring to notice a means of pre-operative work-up which we feel may be more generally employed in public hospitals.

At Sydney Hospital in late 1958 a pre-operative clinic was commenced, staffed by an honorary physician and the Director of Anæsthetics. Its function was to ensure for those patients about to undergo elective operations an adequate assessment of their medical status, with particular emphasis upon cardiac and respiratory reserve and a pre-operative assessment of anæsthetic risk. Suggestions as to the type of anæsthesia were noted on the patient's subsequent in-patient clinical notes. Any investigations and/or therapy were commenced on an out-patient basis as far as practical.

By no means are all patients about to undergo operation in the immediate future seen at this clinic; only those who are considered to be "at risk" are seen, and the source of patients' referral is threefold. Firstly, on booking, each elective operation candidate is required to have a chest X-ray, hæmoglobin, blood film and blood type examination. Any patient with abnormalities of these investigations are notified by the Superintendent's office to report to the pre-operative clinic. Secondly, each surgical out-patient department is able to refer directly to the clinic, because of their patients' age, their histories of previous anæsthetic difficulties, their known medical ailments or the magnitude of the proposed surgery. Thirdly, patients are referred by consultants to the clinic for assessment and subsequent admission.

It is felt that this clinic has improved patient care in those patients who are known for one or other reason to be "at risk". The patient arrives in the surgical ward in as good medical status as possible; the patient is reassessed for anæsthesia once again on the day prior to operation. From the hospital administration's view, surgical beds are less often housing medical problems held over for physician's opinion. Ideally every patient should come to the theatre with optimum physiological reserve; we feel that one brief examination, often late on the eve of operation, is not sufficient, particularly in the group at risk.

Yours, etc.,

DOUGLAS JOSEPH,
Director of Anæsthetics and Resuscitation.

CON REED,
Honorary Assistant Physician.

Sydney Hospital,
Sydney.
May 16, 1961.

CHILD GUIDANCE CENTRES AND THE COMMUNITY.

SIR: Your editorial (MED. J. AUST., February 25, 1961) on "Child Guidance Centres and the Community" goes to the heart of the matter. Are these centres valuable, and how good are they? The second European Seminar on Child Guidance, held at Brussels in September, 1960, was largely devoted to a discussion of this problem, and guidelines for research into community needs, on the one hand, and assessment of therapeutic results, on the other, were brought forward. One of the results of this meeting has been the setting up of several new research programmes which it is hoped will contribute to a resolution of this uncertainty.

Yours, etc.,

DONALD F. BUCKLE.

World Health Organization,
Copenhagen.
May 8, 1961.

BREAST FEEDING AND ARTIFICIAL FEEDING.

SIR: I had intended to hasten to support Dr. Earnshaw's plea to encourage breast feeding, but another enthusiastic breast feeding mother took the words off my pen. My present concern is that some of your readers may have been misled by the "Current Comment" on "Breast Feeding and Artificial Feeding" (MED. J. AUST., March 25, 1961) into believing that someone had demonstrated any superiority in artificial feeding. The "Current Comment" mainly referred to the M.R.C. Special Report and quoted some of the conclusions, whereas the Norboten Report carefully refused to draw conclusions though they had done very similar work. They pointed out that there were several notable omissions in their study, e.g., serum lipids and emotional reactions, and in any study where there are multiple factors to be considered any conclusions must be drawn with extreme care.

I consider that the writers of the Special Report have not interpreted their findings correctly, and that the "Current Comment" tends to take them too seriously. I think that many pædiatricians would agree with me in refusing to accept higher weight gain or increased ossification as proof of optimal nutrition, and there are many possible explanations of the higher gamma globulin in the artificially fed which are not indicative of superior nutrition. I also think that few would accept the statement that fluid retention was proved not to be the cause of the weight gain.

It is also worth drawing the attention of your readers to an almost identical study done by Dr. V. Mary Crosse[1] in which her findings in premature babies were almost the same except that her babies did not get rickets, but she had taken the obvious precaution of adding calcium and vitamin D to breast milk. Nature never intended breast milk to feed premature babies, but it is surely the most suitable basic food to which the extras may be added. Dr. Crosse drew the following conclusion:

> We cannot subscribe to the opinion of those who state that human milk is unsuitable or inferior for premature babies. It is the food that is best tolerated by the smallest babies in the first two weeks and by sick babies. The return to birth weight was not prolonged. In our opinion breast milk is the best food for premature infants.

[1] From the original in the Mitchell Library, Sydney.

[1] *Arch. Dis. Childh.*, 1954, 29: 178 (June).

I would suggest that interested readers study all three reports in detail, and then give some thought to the recent work on the fats in both milks and the effect of the mineral content of cow's milk on the renal function of the immature infant before reaching any conclusions.

Yours, etc.,

CLAIR ISBISTER.

North Shore Medical Centre,
66 Pacific Highway,
St. Leonards.
May 15, 1961.

PENICILLINASE AS A PHARMACEUTICAL BENEFIT.

SIR: I would like to draw attention to the permissible method of prescribing penicillinase as a Pharmaceutical Benefit, namely 800,000 units as a single injection with no repeats.

Penicillinase is a most potent antigen and in itself is capable of inducing a high state of sensitivity in humans with possible severe reactions on further later exposure. It is advisable therefore, in an effort to reduce this possibility, to repeat the first injection within a short period of time; in any case most patients with penicillin reactions require a further injection of penicillinase after four days to obtain therapeutic relief. I would like to urge therefore through these columns that penicillinase should be included in the Pharmaceutical Benefits list as one injection of 800,000 units with one repeat.

There is also another matter which has received little mention in the literature and that concerns "Celbenin", the new penicillinase-resistant penicillin. When this drug is prescribed, greater care than ever must be exercised in excluding possible penicillin allergy in any patient. If certain allergic reactions do occur (and they are increasing with alarming rapidity in the community) then penicillinase may be useless. The patient may thus be left with sequelæ such as serum sickness type reactions or chronic urticaria which no drug, including corticosteroids, can effectively control.

Yours, etc.,

R. MUNRO FORD.

163 North Terrace,
Adelaide.
May 17, 1961.

ISONIAZID ALONE?

SIR: Your "Current Comment" "Isoniazid Alone?" in your recent Journal of May 20, draws a reasonable conclusion of the type of patient in which the use of isoniazid, without a companion drug, may be permissible; but while trying to define "some patients", you do not state whether or not you are dealing with an infectious patient. However, there may be some danger to the public health if a casual reader accepts your comment as a straightforward proposition. If isoniazid is used alone in the wrong case, the results could be disastrous. It would be short-term economy indeed to use one drug only and accept a lower percentage of cure, while we are striving to eradicate tuberculosis. It would be preferable to emphasize the fact that, where full facilities are available as they are in this country, it is important to determine whether or not the *Mycobacterium tuberculosis* infecting the particular patient is sensitive to the drugs to be used, and to accept with this the fact that "if drug resistance is avoided by proper combination of drugs, it should be possible to render the sputum negative in all cases" (Crofton[1]).

The conclusions of the Tuberculosis Seminar in Sydney, June, 1960, sponsored by the W.H.O. in collaboration with the Government of Australia and the National Association for the Prevention of Tuberculosis in Australia, recognized that there might be circumstances in which the use of isoniazid alone must be accepted, but stated that "Two-drug therapy is best for treatment of the active case, and this should be continued for a minimum of twelve months. Irrespective of the drug used, it should be administered daily". The seminar also recognized that domiciliary treatment programmes might be essential in some countries, but: "If hospital beds are available, a preliminary period in hospital is valuable for isolation, assessment, intensive combined therapy and education. . . ." During this period contacts can be investigated and educated.

[1] *Brit. med. J.*, 1960, 2: 679 (September 3).

The Twentieth Research Conference in Pulmonary Diseases of the Veterans Administration, United States of America, in February this year, reviewing the study of isoniazid alone compared to isoniazid plus PAS in treatment of minimal and non-cavitary moderately advanced tuberculosis, showed that although a satisfactory result was obtained with isoniazid alone in 90% of cases treated, the results of the isoniazid alone group were inferior in all respects measured (X-ray change, sputum conversion and emergence of resistant organisms), although not with large differences, to the group treated with isoniazid and PAS.

The "probability that many patients are being treated with isoniazid alone" might apply on a limited scale in the U.S.A., but would certainly not in Great Britain or in Australia.

The weakness of the comparisons of the groups treated in the U.S.P.H.S. Tuberculosis Therapy Trials in 1952 (which is also some years back), was that streptomycin was given only twice weekly.

The case for isoniazid alone can be put more strongly perhaps for the treatment of potentially active cases, and for disease prophylaxis in tuberculin reactors without obvious disease.

Yours, etc.,

ALAN KING,
Director of Tuberculosis.

Commonwealth Department of Health,
Canberra, A.C.T.
May 22, 1961.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Course in Neurology.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that a course in neurology, suitable for physicians and those studying for higher degrees or diplomas, will be held at the Northcott Neurological Centre, under the supervision of Dr. L. S. Basser, from 8 p.m. to 9.30 p.m. as follows:

Tuesday, June 6: "Demyelinating Disease — Including Multiple Sclerosis", Dr. K. B. Noad.

Thursday, June 8: "Epilepsy—Nature, Diagnosis, Treatment", Dr. L. S. Basser.

Tuesday, June 13: "Cerebral Tumours — Pathology, Symptomatology, Investigation", Dr. W. J. Burke.

Thursday, June 15: "Cerebrovascular Disease—Anatomy, Physiology, Pathology; Carotid and Basilar Insufficiency Syndromes; Thrombosis—Hæmorrhage, Embolus", Dr. W. H. Wolfenden.

Tuesday, June 20: "Extrapyramidal Disorders, with Particular Reference to Parkinson's Disease", Dr. G. Selby.

Thursday, June 22: "Diseases of the Spinal Cord", including motor neurone disease, sub-acute combined degeneration of the cord, cervical spondylosis, tumours, Dr. J. L. Allsop.

Tuesday, June 27: "Neuropathology", Dr. B. Turner.

Thursday, June 29: "Neurological Disorders in Childhood", Dr. L. Rail.

Tuesday, July 4: "Disorders of Language", Dr. K. B. Noad.

Thursday, July 6: "Diseases of Muscles", with particular reference to myopathies and myasthenia gravis, Dr. L. S. Basser.

Tuesday, July 11: "Neurological Aspects of General Medical Diseases", Dr. W. J. Burke.

Thursday, July 13: "Neuro-radiology—Plain X-rays, Skull and Spine", Dr. B. P. Cahill.

Tuesday, July 18: "Headache — Diagnosis, Investigation and Treatment", with special reference to migrainous equivalents, Dr. G. Selby.

Thursday, July 20: "Peripheral Nerve Lesions and Neuropathies", Dr. W. H. Wolfenden.

Tuesday, July 25: "Hereditary and Familial Neurological Disorders", Dr. J. L. Allsop.

Fee for attendance is £5 5s., and those wishing to enrol are requested to make early application to the Course Secretary, The Post-Graduate Committee in Medicine, Herford House, 188 Oxford Street, Paddington, New South Wales. Telephone: FA 0671. Telegraphic address: "Postgrad Sydney".

ROYAL PRINCE ALFRED HOSPITAL: EAR, NOSE AND THROAT DEPARTMENT.

Seminar Programme, 1961.

THE staff of the ear, nose and throat department of the Royal Prince Alfred Hospital, Sydney, will conduct a seminar on the second Saturday of every month at 8 a.m. in the Scot Skirving Lecture Theatre. The main speaker will not exceed forty minutes, and there will be a discussion at the conclusion of his remarks. All medical practitioners and clinical students are invited to attend.

At the next seminar, to be held on June 10, Dr. H. D. Raffan will speak on "Tumours of the Naso-Pharynx".

Naval, Military and Air Force.

APPOINTMENTS.

THE following appointments, changes, etc., are published in the *Commonwealth of Australia Gazette*, No. 36, of May 4, 1961.

NAVAL FORCES OF THE COMMONWEALTH.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

Appointments.—Surgeon Lieutenant-Commander John Roger Lawrance-Owen is appointed on loan from the Royal Navy, with seniority in rank of 2nd January, 1961.

Termination of Appointments.—The appointment of John Roger Lawrance-Owen on loan from the Royal Navy in the rank of Surgeon Lieutenant is terminated, dated 1st January, 1961. The appointment of Richard George Hingston as Surgeon Lieutenant (for Short Service) is terminated, dated 22nd November, 1960.

Citizen Naval Forces of the Commonwealth.

Royal Australian Naval Reserve.

Appointments.—Surgeon Lieutenant-Commander Shane Andrew Clarke Watson, D.S.C., Royal Australian Naval Volunteer Reserve, is appointed Surgeon Lieutenant-Commander, with seniority in rank of 15th June, 1946, dated 1st November, 1960.

District Naval Medical Officer.—Surgeon Lieutenant-Commander Shane Andrew Clarke Watson, D.S.C., is appointed District Naval Medical Officer, New South Wales, dated 1st December, 1960. The appointment of Surgeon Lieutenant Kenneth Aubrey Boulton as District Naval Medical Officer, Western Australia, is terminated, dated 11th August, 1960.

AUSTRALIAN MILITARY FORCES.

Citizen Military Forces.

Northern Command.

Royal Australian Army Medical Corps (Medical).—139171 Captain N. J. Nicolaides is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (Northern Command), 21st February, 1961.

Southern Command.

Royal Australian Army Medical Corps (Medical).—431963 Colonel V. D. Plueckhahn (Assistant Director Medical Services, Head-quarters 3rd Division), is seconded whilst in the United Kingdom and United States of America, 6th February, 1961.

The Royal Tasmania Regiment.

Royal Australian Army Medical Corps (Medical).—615338 Colonel C. W. Clarke relinquishes the appointment of Deputy Director of Medical Services, Head-quarters Tasmania Command, 30th June, 1960, and is transferred from Royal Australian Army Medical Corps (Medical), Tasmania Command, and appointed Assistant Director of Medical Services, Head-quarters, The Royal Tasmania Regiment, 1st July, 1960, and is borne supernumerary to the authorized establishment of Colonels, with pay and allowances of Lieutenant-Colonel (at own request). The following officers are transferred from Royal Australian Army Medical Corps (Medical), Tasmania Command, 1st July, 1960, with regimental seniority in accordance with Army seniority as shown:—Majors 69210 A. C. D. Corney (26th October, 1955) and 615388 R. J. Connolly (26th November, 1958), 615399 Captain T. H. S. Kirkland (22nd July, 1958) and 615430 Captain (provisionally) J. D. Brennan (26th May, 1959).

Western Command.

Royal Australian Army Medical Corps (Medical).— 526611 Captain (provisionally) P. L. Nash is seconded whilst in the United Kingdom, 16th December, 1960.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps (Medical).

Central Command.—The following officer is placed upon the Retired List (Central Command) and granted a military title equivalent to the substantive or honorary rank shown, with permission to wear the prescribed uniform, 30th April, 1961.—Major G. H. McQueen.

The following appointments, changes, etc., are published in the *Commonwealth of Australia Gazette*, No. 38, of May 11, 1961.

AUSTRALIAN MILITARY FORCES.

Citizen Military Forces.

Northern Command.

Royal Australian Army Medical Corps (Medical).—To be Lieutenant-Colonel, 1st January, 1961—431906 Major (Temporary Lieutenant-Colonel) M. W. Elliott.

Southern Command.

Royal Australian Army Medical Corps (Medical).—To be Captain (provisionally) and Temporary Lieutenant-Colonel, 8th February, 1961.—350324 William Ronald Kingston.

Western Command.

Royal Australian Army Medical Corps (Medical).—The provisional appointment of 538095 Captain S. S. Gubbay is terminated, 6th July, 1960.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps (Medical).

Southern Command.—The resignation of Honorary Captain B. T. Jordan of his commission is accepted, 21st March, 1961. The resignation of Honorary Captain A. S. Bodey of his commission is accepted, 21st March, 1961.

Western Command.—To be Honorary Captain, 7th July, 1960—Sasson Stephen Gubbay.

Central Command.—Lieutenant W. L. Dawkins is placed upon the retired list (Central Command) and granted the military title of Lieutenant, with permission to wear the prescribed uniform, 30th April, 1961.

The following appointments, changes, etc., are published in the *Commonwealth of Australia Gazette*, No. 41, of May 18, 1961.

NAVAL FORCES OF THE COMMONWEALTH.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

Appointment.—Rex Justice John Gray is appointed Surgeon Lieutenant-Commander (for Short Service), with seniority in rank of 20th February, 1961, dated 20th February, 1961.

Promotions.—Sub-Lieutenants (U) (on probation) Brian Vincent McDonnell and David Philemon Cilento are promoted to the rank of Surgeon Lieutenant (on probation), dated 1st January, 1961. Sub-Lieutenants (U) (on probation) Patrick James Edwards and Iain Stuart Whitehead are promoted to the rank of Surgeon Lieutenant (on probation), dated 2nd January, 1961.

Promotions.—Sub-Lieutenant (U) (on probation) Warren Atyeo Kemp, Anthony William Swain and Geoffrey Carl Hipwell are promoted to the rank of Surgeon Lieutenant (on probation), dated 9th January, 1961. Sub-Lieutenants (U) (on probation) Michael James Beach and Struan Keith Sutherland are promoted to the rank of Surgeon Lieutenant (on probation), dated 16th January, 1961. Sub-Lieutenant (U) (on probation) Adrian Neil Vorbach is promoted to the rank of Surgeon Lieutenant (on probation), dated 30th January, 1961.

Confirmation in Rank.—Surgeon Lieutenant (on probation) Frederick John Palmer is confirmed in the rank of Surgeon Lieutenant (for short service), with seniority in rank of 10th December, 1959.

Surgeon Lieutenant (for Short Service) (on probation) Malcolm Hamilton Darroch is confirmed in the rank of Surgeon Lieutenant (for Short Service), with seniority in rank of 1st January, 1960.

Surgeon Lieutenant (for Short Service) (on probation) Ronald Ford Barr is confirmed in the rank of Surgeon Lieutenant (for Short Service) with seniority in rank of 25th January, 1960.

Termination of Appointments.—The appointment of David Alexander Noble as Surgeon Lieutenant (for Short Service) is terminated, dated 4th January, 1961.

Citizen Naval Forces of the Commonwealth.

Royal Australian Naval Reserve.

Transfer to the Retired List.—Surgeon Lieutenant-Commander John Hunter Stephenson is transferred to the Retired List, dated 30th December, 1960.

Termination of Appointments.—The appointment of Charles Joseph Avison Parker as Surgeon Lieutenant is terminated, dated 30th December, 1960.

The appointment of Rex Justice John Gray as Surgeon Lieutenant-Commander is terminated, dated 19th February, 1961.

Royal Australian Naval Volunteer Reserve.

Appointment.—Surgeon Lieutenant-Commander Norman Lennox Speirs, Royal Australian Naval Reserve, is appointed Surgeon Lieutenant-Commander, with seniority in rank of 1st August, 1947, dated 30th December, 1960.

AUSTRALIAN MILITARY FORCES.

Citizen Military Forces.

Southern Command.

Royal Australian Army Medical Corps (Medical).—3101035 Captain G. J. Little ceases to be seconded in the United Kingdom, 7th March, 1961.

Western Command.

Royal Australian Army Medical Corps (Medical).—526611 Captain (provisionally) P. L. Nash remains seconded in the United Kingdom, 16th January, 1961. The provisional appointment of 526611 Captain P. L. Nash is terminated, 15th January, 1961. *To be Captain (provisionally)*—526611 Philip Llewellyn Nash, 16th January, 1961, 526689 James Thomas Carrol, 526690 Michael Manners Hill and 526701 Neville Francis Hills, 12th April, 1961.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps (Medical).

Southern Command.—Honorary Captain R. Munro is retired, 30th April, 1961.

Northern Command.—The following officer is placed upon the Retired List (Northern Command) and granted a military title equivalent to the substantive or honorary rank shown, with permission to wear the prescribed uniform, 30th April, 1961: Captain C. H. Wood.

Eastern Command.—The following officers are placed upon the Retired List (Eastern Command) and granted a military title equivalent to the substantive or honorary rank shown, with permission to wear the prescribed uniform, 30th April, 1961: Major M. R. Robertson and Captain A. C. Saunders.

Southern Command.—The following officers are placed upon the Retired List (Southern Command) and granted a military title equivalent to the substantive or honorary rank shown, with permission to wear the prescribed uniform, 30th April, 1961: Majors J. W. H. Merry, G. Pern, E.D., and H. A. W. Watson.

Royal Australasian College of Surgeons.

TRAINING OF SURGEONS.

THE Secretary of the Royal Australasian College of Surgeons has asked us to publish the following announcement concerning arrangements made by the Royal College of Surgeons of England to assist young surgeons in planning their future surgical training.

The Council of the Royal College of Surgeons of England has established a post of Adviser in Surgical Training, the first holder of which is Sir Clement Price Thomas. Some of the duties of the Adviser were originated by Sir Gordon Gordon-Taylor, and are being continued by Sir Clement; these include advice to young surgeons regarding their future surgical training.

Australian College of General Practitioners.

THE FRANCIS HARDEY FAULDING MEMORIAL RESEARCH FUND.

AT the First Convention of General Practitioners held at Melbourne in October, 1960, the Australian College of General Practitioners accepted the offer of F. H. Faulding Co. Ltd. to provide an annual grant of £500 for research in general practice. The fund is established as a memorial to the founder of the firm, who arrived in Sydney on February 21, 1842, as one of the two surgeon superintendents on the barque *Nabob*. It is the wish of the donors that the grant shall be used "to further the general practice of the healing arts of medicine and surgery by the advancement of the efficiency and efficacy of general practitioners in the diagnosis, treatment and prevention of disease". Within these limits no restrictions are placed on the nature of the investigations, provided that the research is undertaken by general practitioners actively engaged in practice. The Council of the College has decided that for the first two years the grants shall be used in the following manner.

The Francis Hardey Faulding Memorial Research Fellowship.

The Australian College of General Practitioners is inviting applications for the Francis Hardey Faulding Memorial Research Fellowship, valued at £500, from general practitioners actively engaged in general practice. Applicants may select any topic which is concerned with the diagnosis, treatment and prevention of disease as met with in Australian general practice, and should give full details of the proposed line of inquiry in the research to be undertaken. Further information may be obtained from the Honorary Secretary, Australian College of General Practitioners, 43 Lower Fort Street, Dawes Point, Sydney, N.S.W.

The Francis Hardey Faulding Memorial Seminar on Group Practice.

The College proposes to hold a Seminar on Group Practice in Australia in Adelaide from October 22 to 25, 1961. This will precede the fourth annual general meeting of the College, to be held from October 27 to 29. Membership of this seminar is open to any general practitioner, and it is hoped that as many group practices as possible will send a representative. Further information may be obtained from the Honorary Secretary, Group Practice Seminar, Box 1790-N, G.P.O., Adelaide.

Australian Medical Board Proceedings.

NEW SOUTH WALES.

THE following additions and amendments have been made to the Register of Medical Practitioners for New South Wales, in accordance with the provisions of the *Medical Practitioners Act*, 1938 (as amended).

Registered medical practitioners who have complied with the requirements of Section 17 (3) and are registered under Section 17 (1) (*a*) of the Act: Bale, Patricia Marea, M.B.,

B.S., 1955 (Univ. Melbourne); Hood, John William, M.B., B.S., 1955 (Univ. Melbourne); Lang, Donald Aylmer Campbell, M.B., B.S., 1950 (Univ. Queensland); Segal, Jakub, M.B., Ch.B., 1946 (Univ. New Zealand).

Registered medical practitioners who have complied with the requirements of Section 17 (3) and are registered under Section 17 (1) (*b*) of the Act: Doran, Terence Malachi, M.B., Ch.B., 1936 (Univ. Liverpool), D.A., R.C.P. & S. (England), 1946; Hoare, Malcolm John, M.B., Ch.B., 1958 (Univ. Birmingham); Ingham, Robert Geoffrey, M.B., Ch.B., 1955 (Univ. Liverpool); Lindsay, David Grant, M.B., Ch.B., 1944 (Univ. Aberdeen); Mitchell, John Howard, M.B., B.Ch., 1937 (Univ. Dublin); Molloy, Hugh Francis, M.R.C.S. (England), L.R.C.P. (London), 1955; Sennett, Oscar Hyman, M.R.C.S. (England), L.R.C.P. (London), 1936; Twentyman, James Edward Clive, B.Chir., 1958, M.B., 1959 (Univ. Cambridge); Walker, Ian Robert, M.B., Ch.B., 1959 (Univ. Bristol); Wooller, Harry Owen, M.B., Ch.B., 1956 (Univ. Birmingham), M.R.C.S. (England), L.R.C.P. (London), 1956.

Registered medical practitioner who has complied with the requirements of Section 17 (3) and is registered under Section 17 (2B) of the Act: Sticher, Christian August, M.D., 1936 (Univ. Bonn.).

The following have been issued with a licence under Section 21C of the Act: Fekete, Istvan, for a period of one year from April 1, 1961; Buivids, Antons, for a period of one year from April 9, 1961; Verbok, Geza, for a period of one year from March 23, 1961; Kaufman, Mieczyclaw, for a period of one year from March 23, 1961; Nagy, Laszlo, for a period of one year from April 10, 1961; Harasymczuk, Isjaslaw Leonid Plato, for a period from May 1 to September 15, 1961; Lezynska, Alicja, for a period of one year from March 23, 1961.

Notes and News.

Poliomyelitis Vaccine Committee.

The Minister for Health, Dr. D. A. Cameron, announced in a Press statement that an expert committee of five Australian scientists and medical men had begun an investigation into the problems of poliomyelitis vaccine production which have been encountered at the Commonwealth Serum Laboratories, Melbourne. He said that the committee would continue its investigations until the difficulties experienced in production and testing had been resolved. The committee comprises the following: Sir Macfarlane Burnet, the Director of the Walter and Eliza Hall Institute, Melbourne; Professor F. J. Fenner, Professor of Microbiology at the John Curtin School of Medical Research in the Australian National University; Dr. E. L. French, senior principal research officer of the C.S.I.R.O. Division of Animal Health; Dr. E. V. Keogh, medical adviser of the Anti-Cancer Council of Victoria; and Dr. C. E. Cook, Director of Public Health in the Commonwealth Department of Health.

Publications on Fluoridation.

The Tasmanian Department of Health Services has produced two attractive publications, a booklet and a leaflet, on fluoridation. Both are designed for general distribution. The booklet contains 40 pages of well presented material printed on art paper with effective use of colour throughout. All aspects of the fluoridation of water supplies and its value to a community are dealt with in a straightforward fashion that should be acceptable to a non-medical reader. Of most value probably is a questions and answers section, which should satisfy even the most inquiring mind. The leaflet is very much briefer but covers the essentials. Both publications can be purchased from the Department. The price of the booklet is 2s. per copy or £90 per 1000 copies. Copies of the leaflet are supplied without charge up to an equivalent quantity of booklets ordered, or at the price of £5 per 1000 copies if purchased separately.

Smith and Nephew Associated Companies Limited: Surgical Fellowships.

Smith and Nephew Associated Companies Limited are offering six surgical fellowships to selected medical graduates from the Commonwealth and developing countries. The fellowships are worth £1200 sterling per year, and are tenable only in the United Kingdom. They will be available in any branch of surgery or associated research. Fellows may be of either sex, and must hold a medical qualification registrable in Britain; they must have had at least two years'

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED APRIL 29, 1961.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	..	..	4(1)	..	..	..	..	..	4
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	..	..	..	..	4	..	4
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	1(1)	..	..	..	..	..	..	..	1
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	1(1)	..	..	..	..	..	..	..	1
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	6(2)	15(14)	1(1)	..	..	..	2	..	24
Diphtheria	2	..	..	..	1(1)	..	..	..	3
Dysentery (Bacillary)	..	1	..	..	..	..	..	..	1
Encephalitis	1	2(2)	..	..	..	..	..	..	3
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	..	..	..	..	..	..	..	..
Infective Hepatitis	94(39)	91(65)	10(1)	13(6)	..	2	1	3	214
Lead Poisoning	..	..	1	..	..	..	..	..	1
Leprosy	..	..	..	..	..	..	..	..	..
Leptospirosis	..	..	..	..	..	..	..	..	..
Malaria	..	..	..	..	..	..	..	..	..
Meningococcal Infection	..	1(1)	..	..	..	..	..	..	1
Ophthalmia	..	..	..	..	1	..	..	..	1
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	4	2	2(2)	..	..	1	..	..	9
Puerperal Fever	4(1)	1	..	..	..	..	..	..	5
Rubella	..	6(3)	..	1	2(1)	..	..	1	10
Salmonella Infection	..	..	..	..	..	..	..	..	..
Scarlet Fever	3(2)	12(5)	..	2(2)	..	..	..	1	18
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	1(1)	1	..	..	..	..	..	2
Trachoma	..	..	..	..	4(4)	..	..	..	4
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	14(8)	16(12)	9(8)	2(1)	5(3)	1(1)	..	..	47
Typhoid Fever	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne)	..	..	..	..	..	..	..	..	..
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

general clinical experience since registration. The awards are being established so that outstanding graduates can "further their education to the benefit of their individual countries", and the candidates must undertake to return home to practise within a year of the completion of their studies.

Application forms, which must be completed and returned to England by July 31, 1961, are obtainable from the Secretary, Smith and Nephew Associated Companies Limited, 2 Temple Place, Victoria Embankment, London, W.C.2, England.

Notice.

CLINICAL SOCIETY OF THE ROYAL HOSPITAL FOR WOMEN, PADDINGTON.

DR. BEVAN REID will give a lecture to the Clinical Society of the Royal Hospital for Women on Tuesday, June 13, 1961, at 8 p.m. in the Lecture Hall on the second floor of the hospital. The lecture is entitled: "The Cellular Biology of the Cervix and Its Relationship to Problems of Carcinogenesis". This lecture is open to all interested medical practitioners who may desire to attend.

Corrigendum.

THE DEVELOPMENT OF THE SPHYGMOMANOMETER.

AN error has occurred at the end of the article by Dr. Bryan Gandevia on "The Development of the Sphygmomanometer", published in the issue of the Journal of May 20, 1961. Under Dr. Gandevia's signature, on page 758, he is designated "Honorary Curator, Museum of Natural History, Medical Society of Victoria". This should of course read "Honorary Curator, Museum of Medical History . . .". We apologize to Dr. Gandevia for this mistake.

Medical Appointments.

THE following have been appointed Members of the New South Wales State Cancer Council, for a period of three years from May 13, 1961: Dr. H. Selle, Professor Sir Edward Ford, Sir Edward Hallstrom, The Hon. J. A. Weir, Dr. F. W. Niesche, The Hon. R. R. Downing. Professor S. H. Roberts, Vice-Chancellor of the University of Sydney, is, by virtue of his office, Chairman of the Council.

Nominations and Elections.

THE undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

Bishop, Janice Margaret, M.B., B.S., 1960 (Univ. Sydney); Davis, Geoffrey Lancelot Rutter, M.B., B.S., 1958 (Univ. Sydney); Hamilton, Peter, M.B., B.S., 1961 (Univ. Sydney); Macindoe, Neil Arnold, M.B., B.S., 1961 (Univ. Sydney); Murray, Patrick John Stephens, B.Chir., 1957 (Univ. Cambridge), M.B., 1958 (Univ. Cambridge), M.R.C.S. England, L.R.C.P. London, 1957; Nebenzahl, Ben, M.B., B.S., 1959 (Univ. Sydney); Nelson, David Selwyn, M.B., B.S., 1960 (Univ. Sydney); Shea, Peter Barry, M.B., B.S., 1961 (Univ. Sydney); James, Alan Ashley, M.B., B.S., 1958 (Univ. Sydney).

Deaths.

THE following deaths have been announced:

WOOD.—John Wood, on May 17, 1961.

HUMPHERY.—Esca Morris Humphery, on May 22, 1961, at Neutral Bay, Sydney.

Diary for the Month.

JUNE 6.—New South Wales Branch, B.M.A.: Organization and Science Committee.
JUNE 7.—Western Australian Branch, B.M.A.: Branch Council.
JUNE 7.—Victorian Branch, B.M.A.: Branch Meeting.
JUNE 8.—New South Wales Branch, B.M.A.: Public Relations Committee.
JUNE 9.—Queensland Branch, B.M.A.: Council Meeting.
JUNE 13.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
JUNE 16.—New South Wales Branch, B.M.A.: Ethics Committee.
JUNE 19.—Victorian Branch, B.M.A.: Finance Sub-Committee.
JUNE 20.—New South Wales Branch, B.M.A.: Medical Politics Committee.
JUNE 21.—Western Australian Branch, B.M.A.: General Meeting.
JUNE 21.—Victorian Branch, B.M.A.: Branch Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): Medical Officers to Sydney City Council. All contract practice appointments in New South Wales. Members are requested to consult the Medical Secretary before undertaking practice in dwellings owned by the Housing Commission.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations, other than those normally used by the Journal, and not to underline either words or phrases.

Authors of papers are asked to state for inclusion in the title their principal qualifications as well as their relevant appointment and/or the unit, hospital or department from which the paper comes.

References to articles and books should be carefully checked. In a reference to an article in a journal the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of article. In a reference to a book the following information should be given: surname of author, initials of author, year of publication, full title of book, publisher, place of publication, page number (where relevant). The abbreviations used for the titles of journals are those of the list known as "World Medical Periodicals" (published by the World Medical Association). If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full data in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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